

# Welcome to DEQ 101!





DEQ 101

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UTAH DEPARTMENT  
OF ENVIRONMENTAL  
QUALITY

# WHERE IT ALL BEGAN . . .

The Environmental Program was started in the 1930's.



Environmental Health was part of the Department of Social Services, and we were known as the Bureau of Environmental Health.

There were 4 sections: Water Pollution  
Air  
Environmental Epidemiology,  
General Sanitation

In the late 70's we became a Division with 6 bureaus:

Bureau of  
Drinking Water

Bureau of Solid &  
Hazardous Waste

Bureau of  
Air Quality

Bureau of Water  
Pollution Control

Bureau of  
Occupational  
Health

Bureau of General  
Sanitation

In Governor Bangerter's 1990 State of the State Address, he suggested the creation of a Department of Environmental Quality.

The Late Senator Steve Rees sponsored SB 34 in the 1991 General Legislative Session to create DEQ.



The bill was voted on three times the last night of the session, and 5 minutes before midnight, the bill passed.

On July 1, 1991, we officially became the Department of Environmental Quality!



# DEQ EMPLOYEES:

205 Scientists

89 Engineers

115 Other Professionals in:  
Administrative Support, Finance, Human  
Resource Management, Information  
Technology, Legal, Planning, Public Affairs



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Department of Environmental Quality

# STATUTORY AUTHORITIES

(ALL)

- ✓ Environmental Quality Code
- ✓ Gov't Records and Management Act
  - ✓ Administrative Rulemaking Act
  - ✓ Administrative Procedures Act



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Department of Environmental Quality

# The Framework of our Department

Values

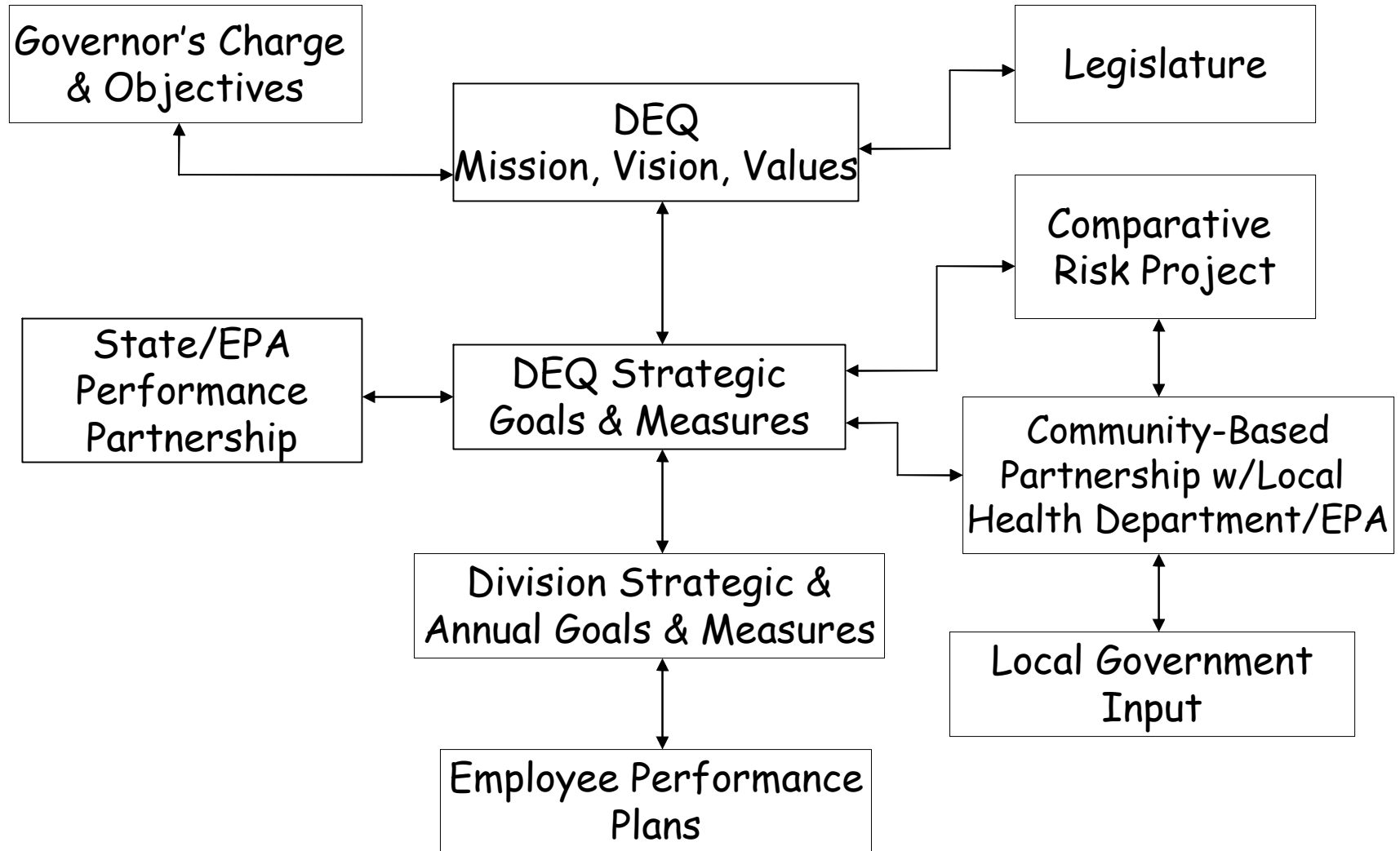
Mission

Operating  
Principles

Vision



# HOW WE DO BUSINESS



# BOARDS

- Statutory and policy-making bodies
- Created by statute
- Appointed by Governor, four-year term
- Represent various sectors
- DEQ Executive Director Executive Secretary (Division Director)



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Department of Environmental Quality

# DEQ BOARDS

Air Quality Board

Radiation Control Board

Drinking Water Board

Solid & Hazardous Waste Control Board

Water Quality Board



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Department of Environmental Quality



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## EXECUTIVE DIRECTOR'S OFFICE



Dianne Nielson,  
Executive Director



Bill Sinclair,  
Deputy Director



# OUR MISSION

Provide the leadership  
in implementing  
the DEQ mission, vision, values  
and operating principles



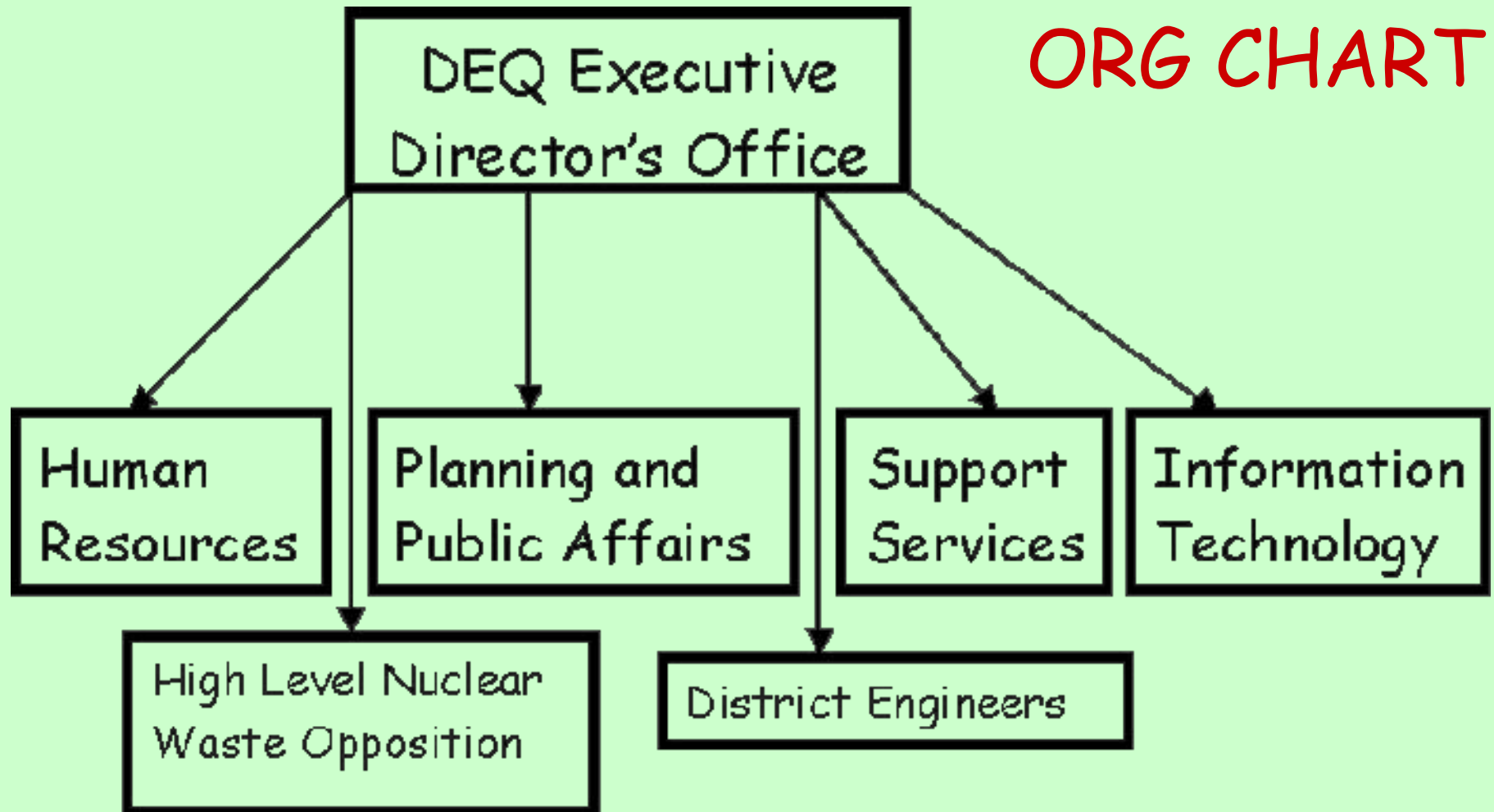
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Executive Director's Office

EDO

## ORG CHART



# EXECUTIVE DIRECTOR'S OFFICE

- Supports implementation of State and Federal environmental laws, rules, and regulations
- Maintains State primacy for implementing Federal programs, working with Federal partners such as EPA and NRC



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Executive Director's Office

# EXECUTIVE DIRECTOR'S OFFICE

- Directs Departmental planning, policy and budget development
- Provides technical and policy recommendations to the Governor and Legislature
- Encourages and fosters partnerships



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Executive Director's Office

# HIGH-LEVEL NUCLEAR WASTE OPPOSITION

- ✓ Governor's task force opposing high level nuclear waste in Utah
- ✓ Chaired by DEQ Executive Director
- ✓ Task force includes various State Department and Office Directors and their staffs who have the expertise needed



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Executive Director's Office

# DISTRICT ENGINEERS (4)

Offer Field Support in:

**Central Utah (1)** - Juab, Millard, Sanpete, Sevier, Piute, and Wayne Counties.

**Southeast Utah (1)** - Carbon, Emery, Grand, and San Juan Counties.

**Southwest Utah (2)** - Beaver, Iron, Garfield, Washington, and Kane Counties.



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Executive Director's Office

# PARTNERS

- Governor, Legislature, and Other State Agencies
- Attorney General's Office
- Federal Agencies such as EPA, NRC, FDA, DOE
- Local Health Departments
- City and County Governments
- Industry
- Environmental Groups



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Executive Director's Office



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# HUMAN RESOURCE MANAGEMENT



Dan Brentel,  
Director



# SERVICES

Payroll

Benefits

Training

Recruitment

Classification

Employee Recognition



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Human Resource Management

# MORE SERVICES...

Employee Relations and Development

Performance Management

Corrective/Disciplinary Action Guidance

Employee Orientation

Employee Records

HR Policies and Procedure Development

Special Projects Targeting Employees



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Human Resource Management

# PARTNERSHIPS

- State HRM and other State Agencies
- State Finance
- State Retirement System
- PEHP and Healthy Utah
- Local Health Departments
- Utah Transit Authority



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Human Resource Management

# ONGOING ASSIGNMENTS

- ✗ Placement of Department HR Policies in Groupwise sharefolder
- ✗ Employee development track
- ✗ Brownbag leadership forum
- ✗ Supervisor/Drivers Ed/Workplace Violence Training
- ✗ Tracking systems for quality recognition awards and employee professional licensing



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Human Resource Management

## More ongoing assignments . . .

- ✗ Implementation of new State payroll system
- ✗ Completion of job analysis questionnaires
- ✗ Assisted in the implementation of Utah Job Match
- ✗ Trustee of Atlas personnel records - provide GRAMA requests to clients



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Human Resource Management

# ISSUES AND CONCERNS

Employee morale

Employee compensation

Employee retention

Succession issues

Recruitment/retention of qualified applicants

Employee development and training



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Human Resource Management



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# INFORMATION TECHNOLOGY



Ryan Walker,  
Director

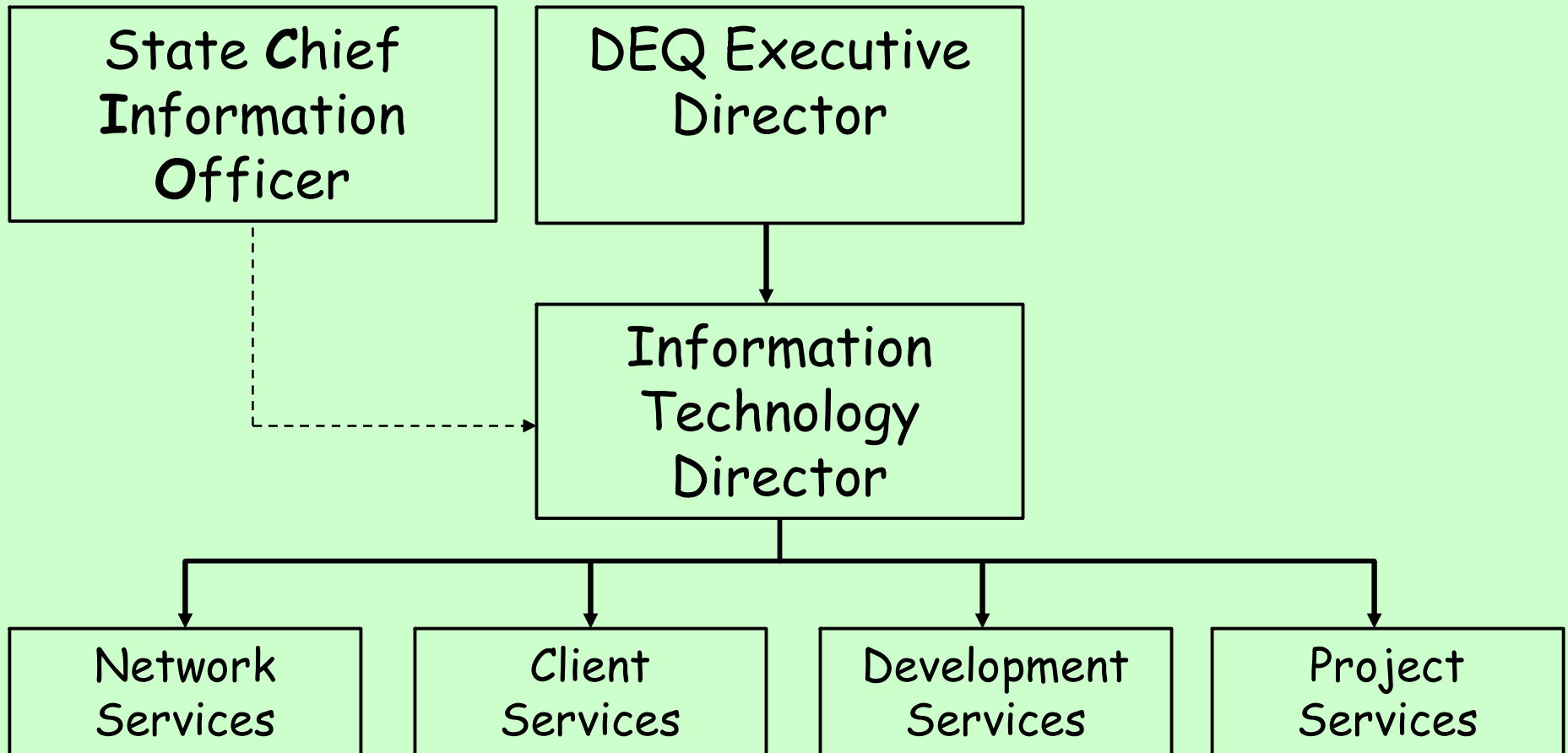
## OUR GOALS

- Assist employees to be as productive as possible using technology resources.
- Make DEQ information available to interested parties that is accurate and timely.





# IT ORG CHART



# Network Services

## Three Positions

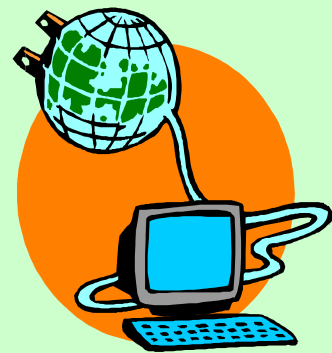
Server operating systems

Delivery of software to desktop via launcher

Internal and external communications

Printer support

Network monitoring



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Information Technology

# Client Services

Three Positions (Plus Positions in Several Divisions)

Support desktop, laptop and other computers

- Hardware evaluation and support
- Desktop application support
- User training

Support for other IT devices (PDAs, etc.)

Security administration



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Information Technology

# Development Services

Five Positions (Plus Positions in Several Divisions)

Develop enterprise applications

Maintain/enhance existing applications

Maintain/administer enterprise databases

Help set programming/database standards

Assist in communications to EPA (NODE)

Support DEQ web server



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Information Technology

# Project Services

One Position

Lead IT Projects

Assist with supervision of other IT positions

Coordinate with IT Contractors & Consultants

Help set programming/database standards



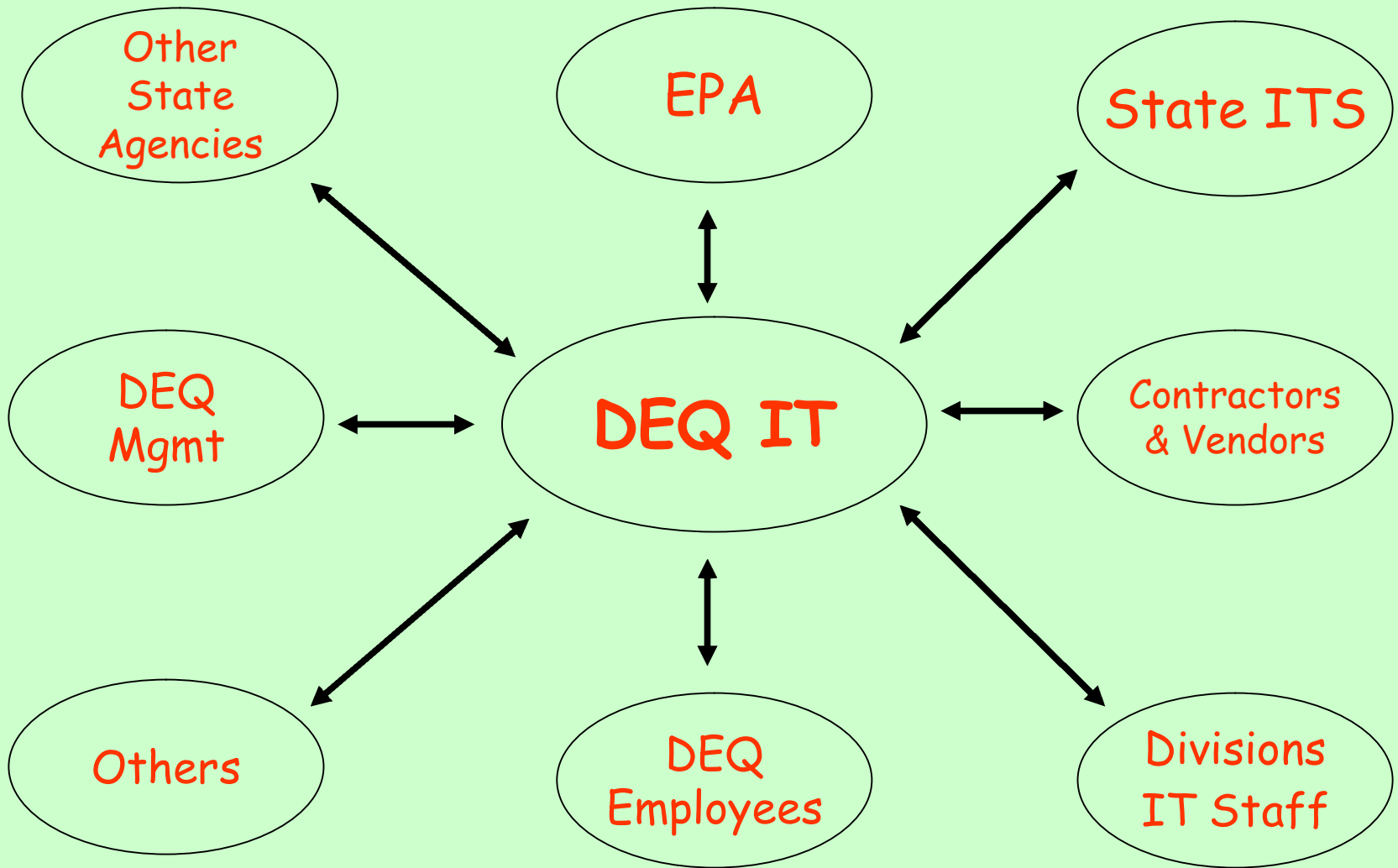
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Information Technology

# PARTNERSHIPS



# SERVICES

-  Provide connectivity to the "outside world"
-  Provide e-mail
-  Keep computers running, in good repair and patched with anti-virus software current
-  Create department-wide applications
-  Create program specific applications
-  Maintain "Single Call" support









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Information Technology

# MORE SERVICES...

-  Provide data security (on the network)
-  Provide nightly backup of all data files
-  Provide offsite access to e-mail and data
-  Support for teleworkers
-  Support PDAs, tablet PCs, laptops and other wireless devices
-  Other technical support and advice



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Information Technology



# ACCOMPLISHMENTS

Department-wide virus protection

High speed network with file and print sharing

Off-site e-mail, file and application accessibility

Application deployment coordination

Hardware and Application standardization



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Information Technology

# ISSUES AND CONCERNS

Keeping customer satisfaction high

Licensing software

Following and enforcing state IT standards

Delivering products on a timely basis

Keeping network, applications and e-mail available 24X7

Managing virus, worms, "misbehaving" programs



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Information Technology

# MORE ISSUES AND CONCERNS . . .

Developing applications and databases to allow information to be shared across divisions, with EPA, and with the Public

Providing adequate IT resources to meet DEQ programmatic needs

Complying with the State of Utah Acceptable Use Policy

Obtaining adequate employee training to stay current with technology (for all employees as well as IT employees)



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Information Technology



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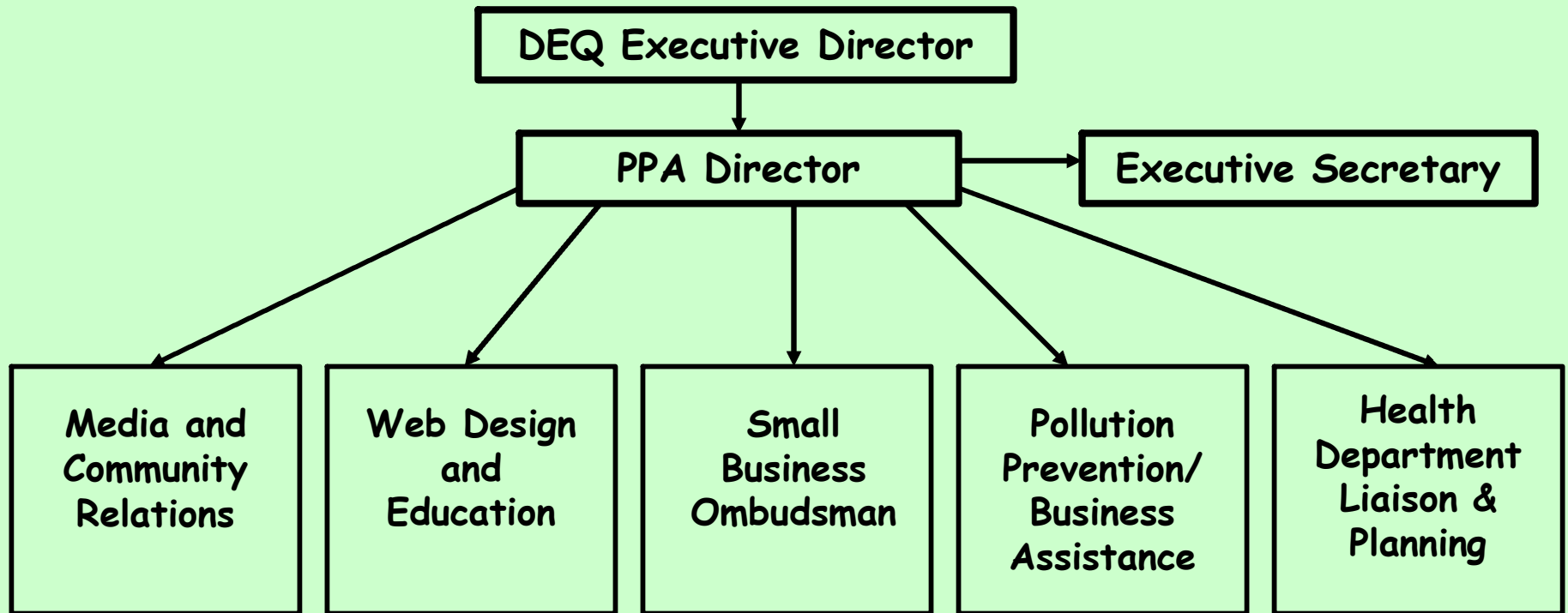
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## PLANNING & PUBLIC AFFAIRS



Leah Ann Lamb,  
Director

# PPA ORG CHART



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Planning & Public Affairs



**Jodie Swanson,  
Executive Secretary  
536-4480**



**Lori Walker,  
Executive Secretary  
536-4480**

→ DEQ Hotline 1-800-458-0145

→ DEQ \_INFO@utah.gov

→ Annual picnic coordination

→ DEQ At-A-Glance

<http://www.deq.utah.gov/references/deqdocs.htm>

→ "Take Your Child to  
Work" Day

→ Earth Day shirts

→ News clips



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**Planning & Public Affairs**

# PLANNING & LOCAL HEALTH DEPARTMENT LIAISON



Bruce Slater, LHD  
Planning Liaison  
Coordinator  
536-4482

- ▶ Coordinate EPA/Local Health Department joint planning & partnership issues. Act as LHD liaison.
- ▶ Coordinate and Compile:
  - Performance Partnership Agreement (PPA),
  - End-of-Year Report (EOY)
  - Environmental Service Delivery Plan (ESDP)/Contracts



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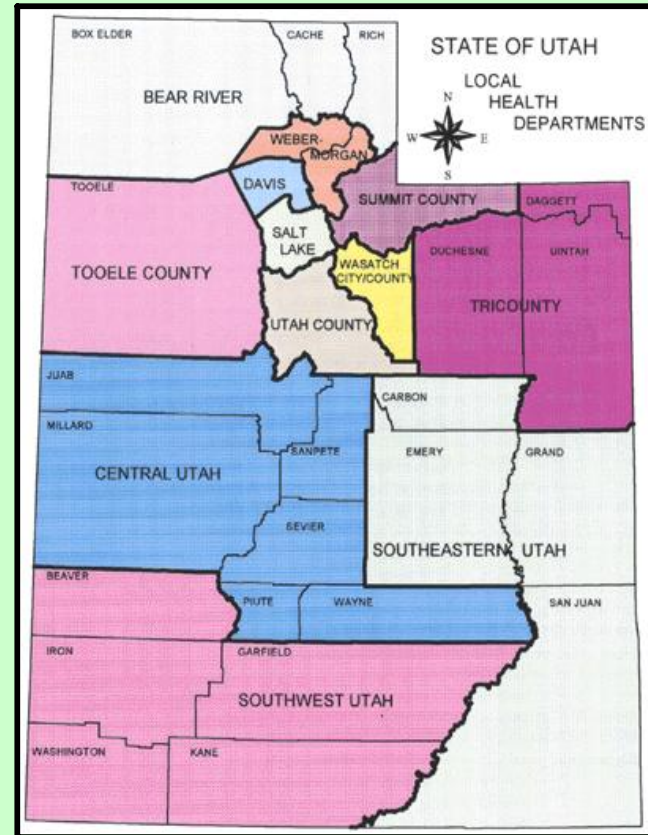
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Planning & Public Affairs

# State of Utah's Local Health Department Map

[http://www.health.utah.gov/lhd/html/state\\_of\\_utah\\_map.html](http://www.health.utah.gov/lhd/html/state_of_utah_map.html)

DEQ Policy requires that you call the Local Health Department officer or Environmental Director before you visit their area.



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Planning & Public Affairs





Donna Kemp Spangler  
Public Information Officer  
(PIO) 536-4484

# MEDIA RELATIONS

- ▶ Department Media Policy
- ▶ Liaison with Governor's PIO
- ▶ Assist media covering DEQ issues
- ▶ Monitor daily local and national media
- ▶ Draft news releases and media advisories
- ▶ Advise and support - media interviews



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**Renette Anderson,  
Community Relations  
536-4478**

# COMMUNITY RELATIONS

- Facilitate priority community relations issues
- Teach Department Leadership & TQA courses
- Provide Small Business Ombudsman services
- Provide staff support to the Air Quality Small Business Compliance Advisory Panel
- Coordinate Clean Utah! and Choose Clean Air programs



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**Planning & Public Affairs**



Dave Allison,  
Community Relations  
536-4479

# COMMUNITY RELATIONS

- ▶ Address "people" aspects of ongoing projects
- ▶ Superfund primarily but assist with others
- ▶ Design and implement outreach campaigns
- ▶ Advise and support - interviews/public meetings



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**Brandon Smart,  
Web Design &  
Education  
536-4274**

# WEB DESIGN and EDUCATION

- ▶ Design/maintain Department Web Pages
- ▶ Coordinate DEQ Environmental Education Events
- ▶ Maintain DEQ Public Information Library
- ▶ Design and Staff Public Displays
- ▶ Represent DEQ on Education-related Committees



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**Planning & Public Affairs**

# POLLUTION PREVENTION



Sonja Wallace,  
Pollution Prevention  
536-4477

- ▶ Provide technical assistance to business and industry in making pollution reductions
- ▶ Coordinate Environmental Management System assistance and activities
- ▶ Facilitate Department pre-design meetings
- ▶ Promote pollution prevention to specific sectors such as the mountain recreation sector



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# RELATIONSHIPS

- Staff support - Executive and Deputy Directors
- Work across all six divisions
- EPA, Local Health Departments & Local Governments
- Governor's PIO,
- Governor's Office of Planning and Budget (GOPB)
- Air Quality Small Business CAP



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# ISSUES - CALL US!



- ☎ Read the Media Policy! If questions, **CALL US!**  
(available in HR Groupwise folder)
- ☎ Communicating environmental issues to public - Keep it Simple! If questions, **CALL US!**
- ☎ Outreach planning and mop-up - We can help you prevent PR disasters, but if you have a PR disaster, **CALL US!**
- ☎ Coordinating joint EPA-DEQ-LHD planning, contracts, and evaluations, **CALL US!**
- ☎ If you have an issue with a local health department, **CALL US!**



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Planning & Public Affairs

# ACCOMPLISHMENTS

- ✓ Press relations - **A+**
- ✓ Leadership Training
- ✓ Pre-Design Meetings
- ✓ Critical Issues and Partnership Project Support
- ✓ DEQ Web site update
- ✓ Choose Clean Air and Radon outreach campaigns



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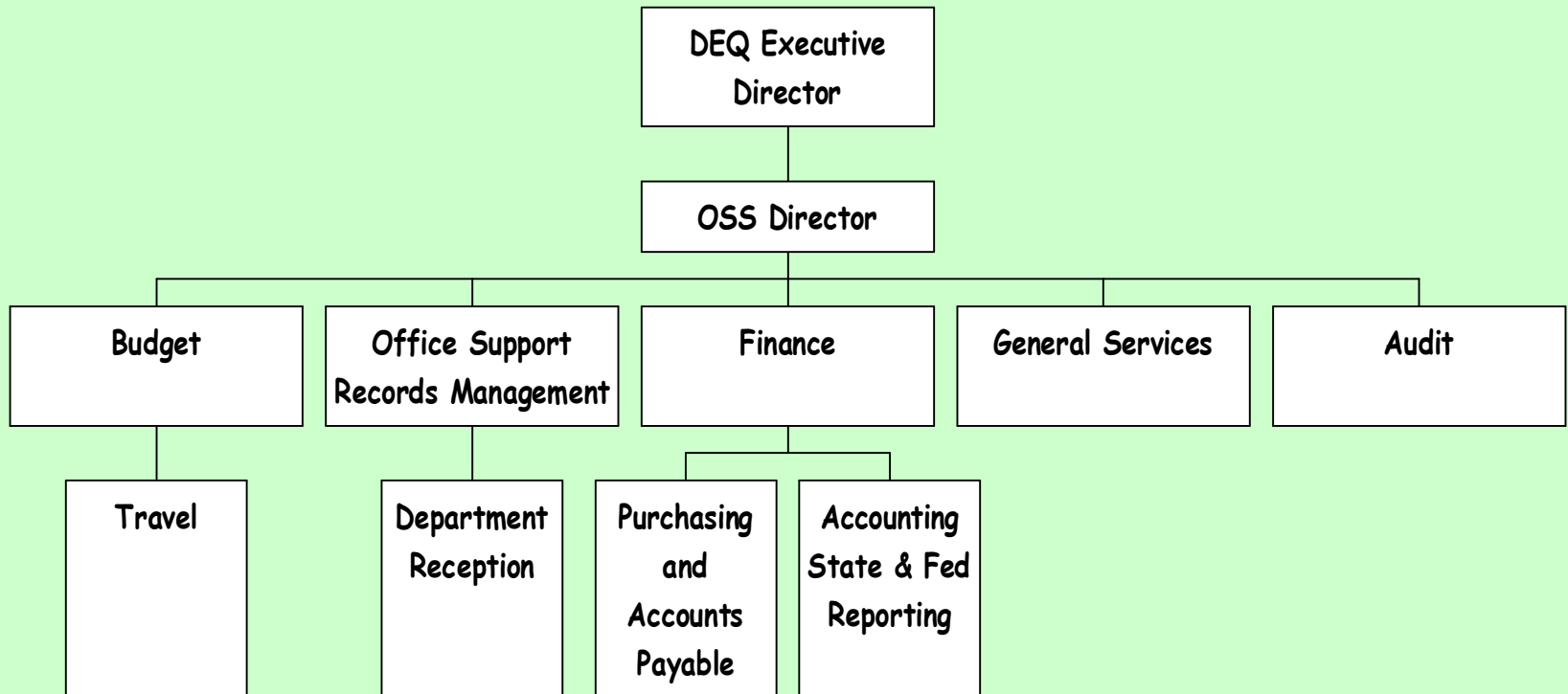
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## SUPPORT SERVICES



Steve Higley,  
Director

# Office of Support Services ORG Chart





# FINANCE



**Craig Silotti**

Negotiating Federal indirect cost rate

Department accounting functions:

- all revenue and expenditure records
- management & maintenance of Dept. accounting system & organizational structure
- accounts receivable
- cash receipt control



**Dale Jorgensen**

# MORE FINANCE

U.S. Treasury draw downs

Petty Cash

Accounts Payable

All Department purchasing and contracting



**Valerie Warr**



**Sharon Schofield**



**Robin Kelly**

# MORE FINANCE . . .

Federal Grant Administration

- Financial reports for applicants
- Close out and Federal grant financial reporting

Financial reports for management

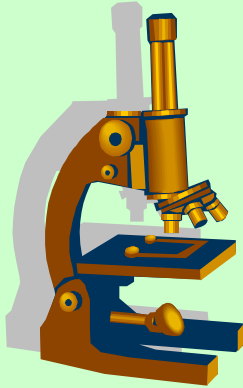


**Marc Earnhardt**



**Meagan Gardner**

# Audit



**Dan Nielson**

Audit fees from waste disposal facilities

Audits of Departmental finance and accounting operations

Audit Department business operations

Special Audits as requested by Department director

Review of contracts for compliance with state procurement regulations

# BUDGET



**Curtis White**

Coordinate preparation of Department budget - \$40 to \$50 million

- Assure adequate budget control
- Respond to questions from the Governor's Office and from the Legislature
- Prepare historical analysis of various budget information



# TRAVEL SECTION



**Debbie Parry**

Books airline tickets; looks for least cost trip options; travel advances; registration fees; State and Department policy compliance

Review and approve out of state travel requests for over 500 trips per year.

Review and prepare travel reimbursement claims for over 2000 trips per year - both in state and out of state travels.



# GENERAL SERVICES:

Risk Management

Security

Construction Projects

Cubicle reconfiguration and design

Custodial Services

Building and Grounds Maintenance



Daryl Cramer



# OFFICE SUPPORT & RECORDS MANAGEMENT



**Laurie Leib**



**Valerie Phillips**



**Eva Jensen**

Telephone Problems

Records Mngt & GRAMA requests

Department Receptionist

Large Conference Room Scheduling

Mail and Payroll Distribution

Travel Back-up - tickets and approvals

Cash Receipts - Travel; bus passes, etc.



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## DRINKING WATER

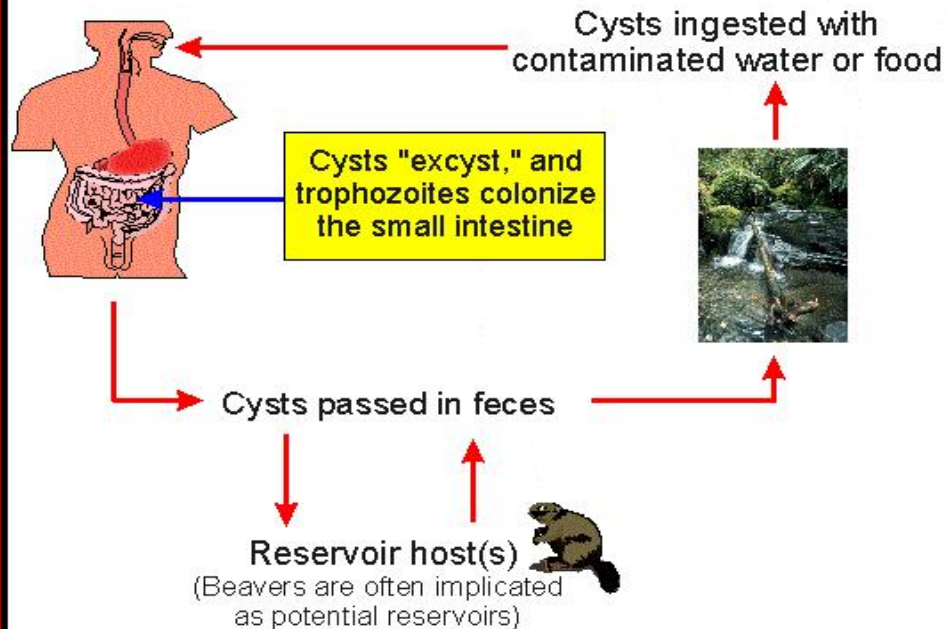


Kevin Brown,  
Director



# OUR MISSION

## THE LIFE CYCLE OF *GIARDIA LAMBLIA* (the causative agent of giardiasis)



(Parasites and Parasitological Resources)

To protect the public from waterborne risks through education, assistance, and oversight.

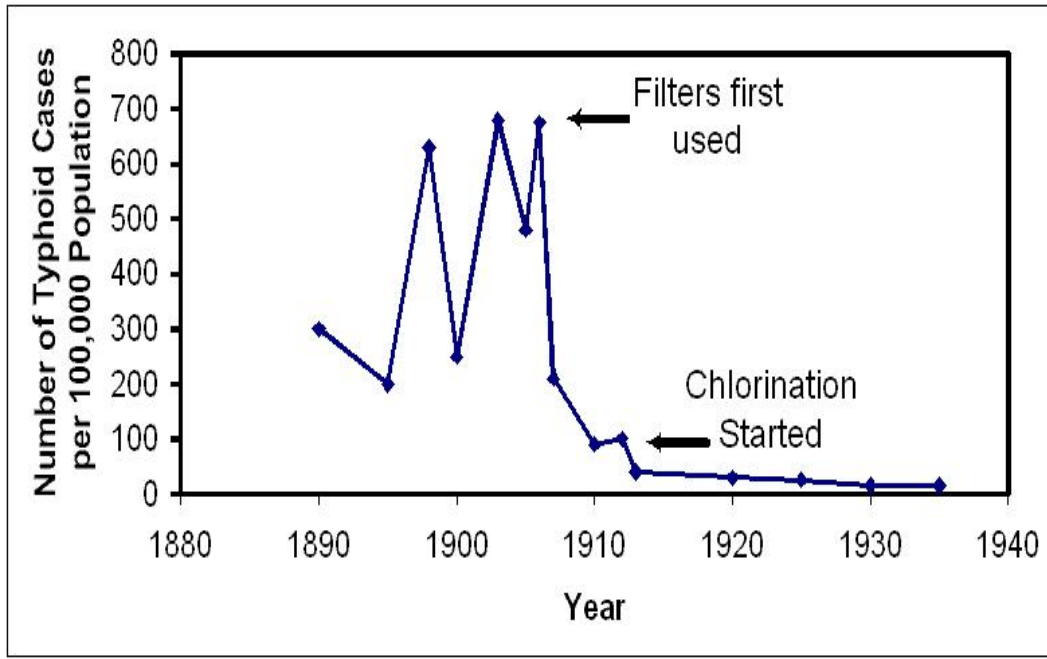


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Drinking Water

# STATUTORY AUTHORITIES

Typhoid Cases from 1890 to 1940



- Federal Safe Drinking Water Act
- State Safe Drinking Water Act

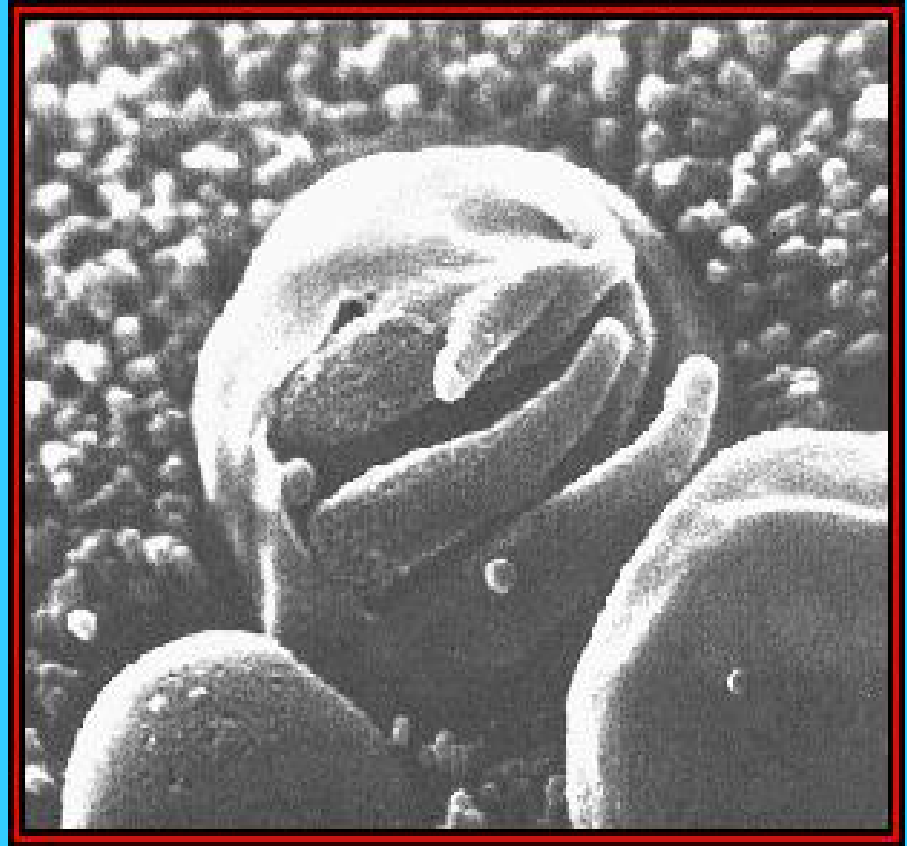


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Drinking Water

# OUR RESPONSIBILITIES

- Oversee 950 water systems serving at least 15 connections or 25 people
- Oversee 1,850 water sources



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Drinking Water



# STATE RULES COVER:

- Infrastructure improvement loan program
- Construction standards, source development, distribution, storage, treatment
- Flow rates (average, peak)



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Drinking Water

# STATE RULES COVER:

Monitoring requirements - 90+ contaminants

Maximum contaminant level exceedance

Source water protection

Operator certification

Backflow contamination/cross connections



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Drinking Water



# Water Systems must monitor for these contaminant groups:

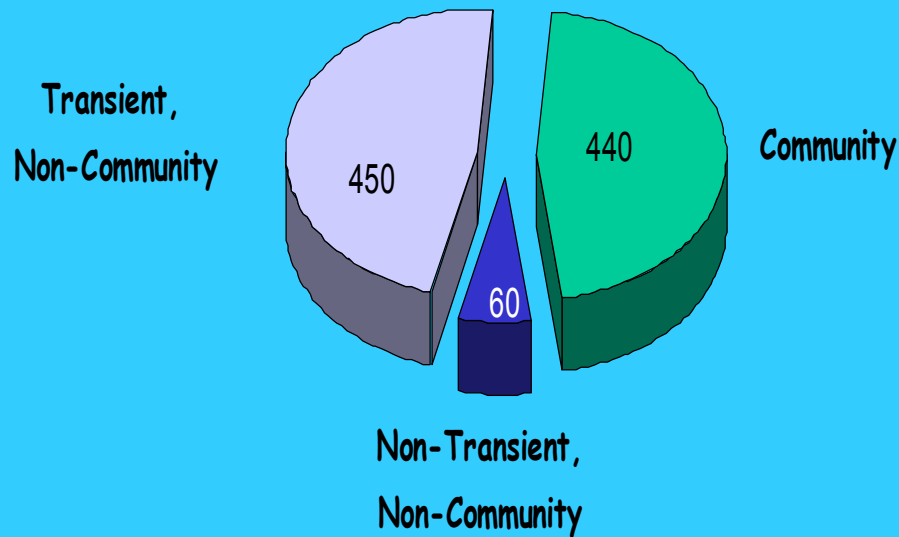
- ❖ Microbiological  
(Total Coliform, *Giardia*, *Cryptosporidium*)
- ❖ Radiological
- ❖ Organic chemicals
- ❖ Inorganic elements
- ❖ Physical characteristics



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Drinking Water

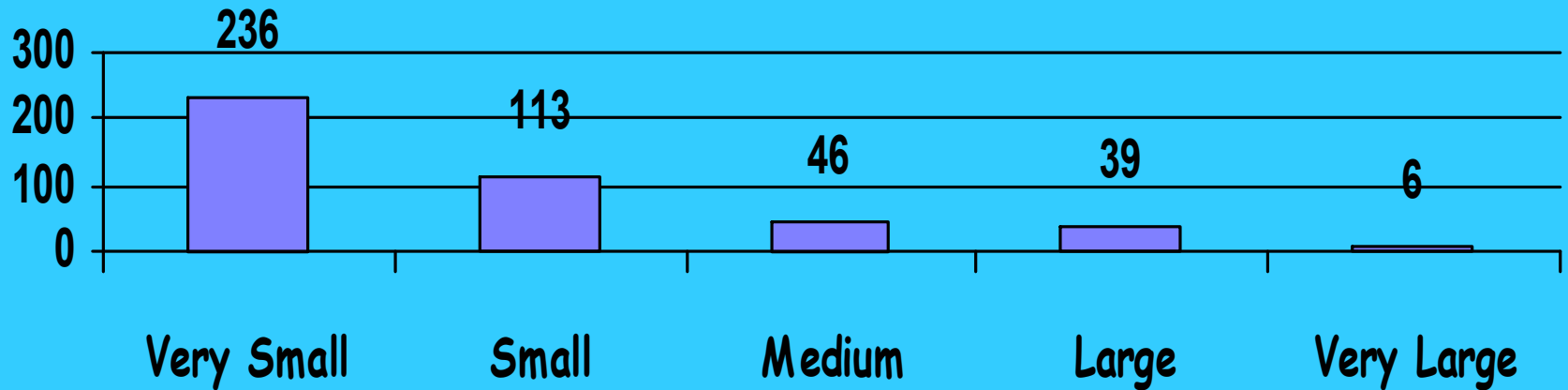
# Public Systems by Type Category



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Drinking Water

# NUMBER OF COMMUNITY SYSTEMS:

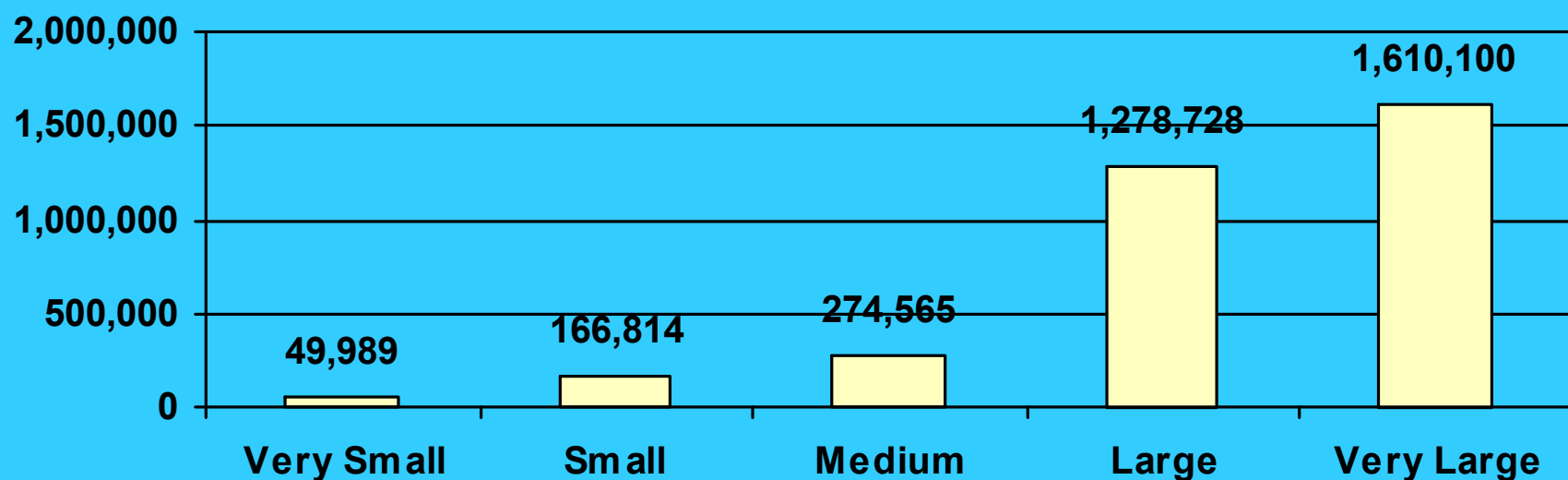


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Drinking Water

# POPULATION POTENTIALLY SERVED:

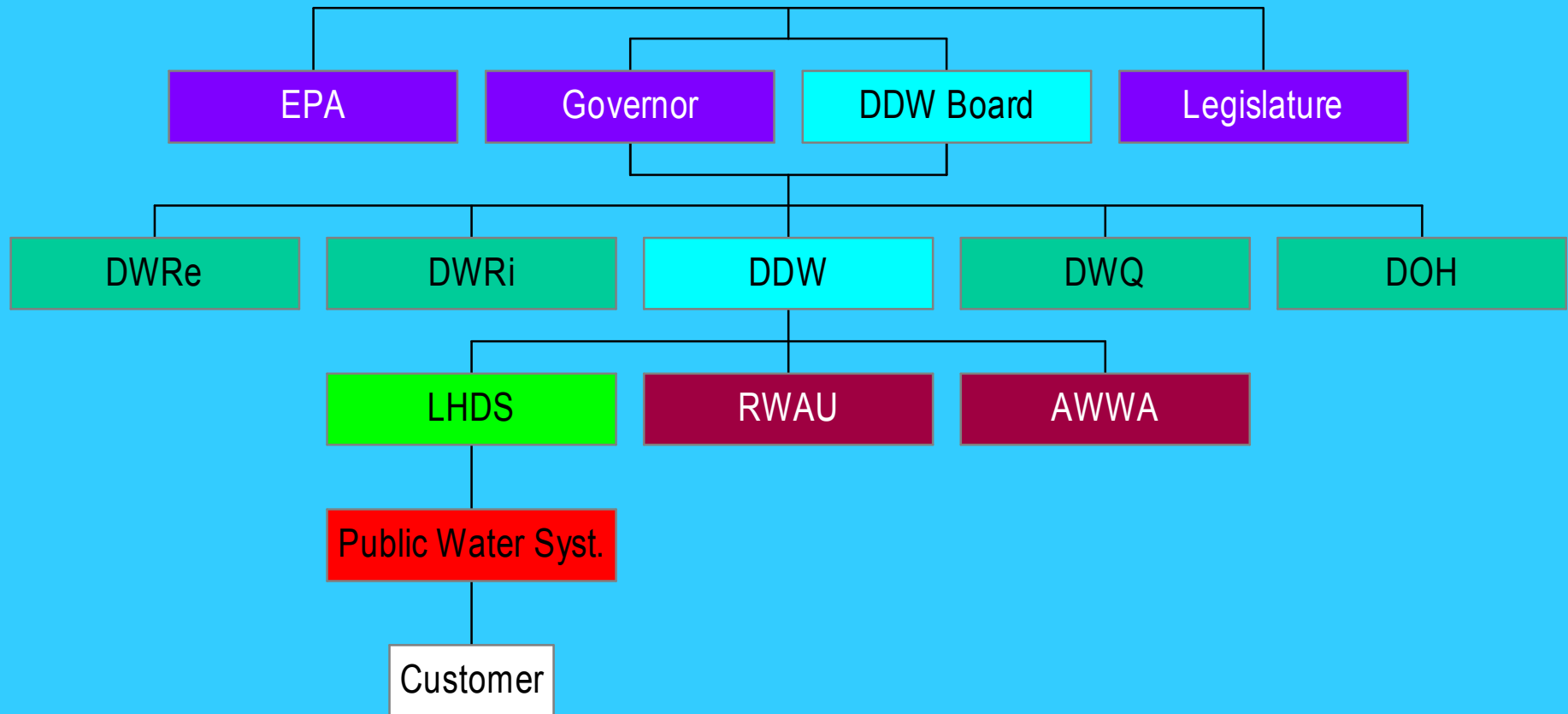
By Community System



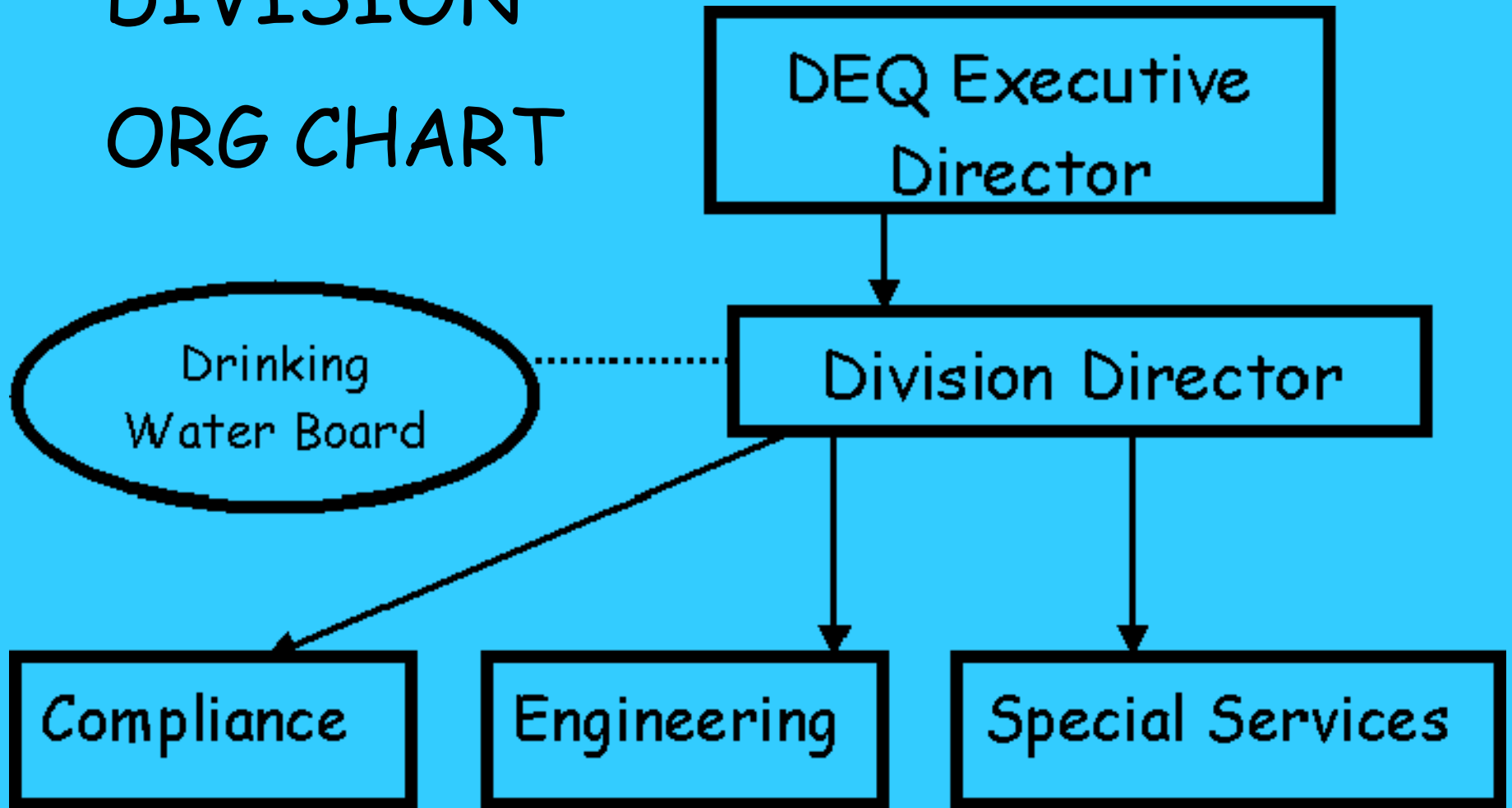
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Drinking Water

# STATE WATER ORGANIZATION



# DIVISION ORG CHART



# DIRECTOR'S OFFICE

Three Staff Members

Primary customer service contact

Long-term planning

Director serves as Drinking Water Board  
Executive Secretary

Plan approvals (construction, source protection)



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Drinking Water

# COMPLIANCE SECTION

Fourteen Staff Members

Drinking water compliance - 25+ EPA rules

Operation certification

Emergency response/Homeland Security

Sanitary surveys

Cross-connection control/backflow prevention  
(Illegal/improper connections to water systems)



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Drinking Water



# ENGINEERING SECTION

Fourteen Staff Members

Financial assistance (\$10,000,000/year)

Plan and specification review

Construction, treatment plant inspections

Technical assistance



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Drinking Water

# SPECIAL SERVICES SECTION

Six Staff Members

- Source water protection
- Treatment plant technical assistance



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Drinking Water

# NUMBERS



- ✓ ~ 90 contaminants monitored
- ✓ 74 water treatment plants (surface water)
- ✓ 1,030 well sources
- ✓ 739 spring sources
- ✓ 21 tunnel sources



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Drinking Water

## More Numbers...

95.4% - Public Water Systems with approved rating

99.9% - Citizens drink water from an approved source

90% - Community systems with source protection plans



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Drinking Water

## And More Numbers...

- 100,000+ - Pieces of information (mainly laboratory analyses) handled per year.
- 400 - Plans reviewed per year.
- 250 - Sanitary surveys conducted per year (with local health departments and forest service assistance)
- 1,950 - Certified water system operators



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Drinking Water

# CURRENT ISSUES

Not-approved water systems

Safe Drinking Water Act implementation (new federal rules)

Database conversion/data management

Public awareness of cross connections (shoddy plumbing-dishwashers, water softners, lawn irrigation systems, secondary irrigation systems)

Water conservation

Electronic document management system



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Drinking Water



For more information:

[www.drinkingwater.utah.gov](http://www.drinkingwater.utah.gov)



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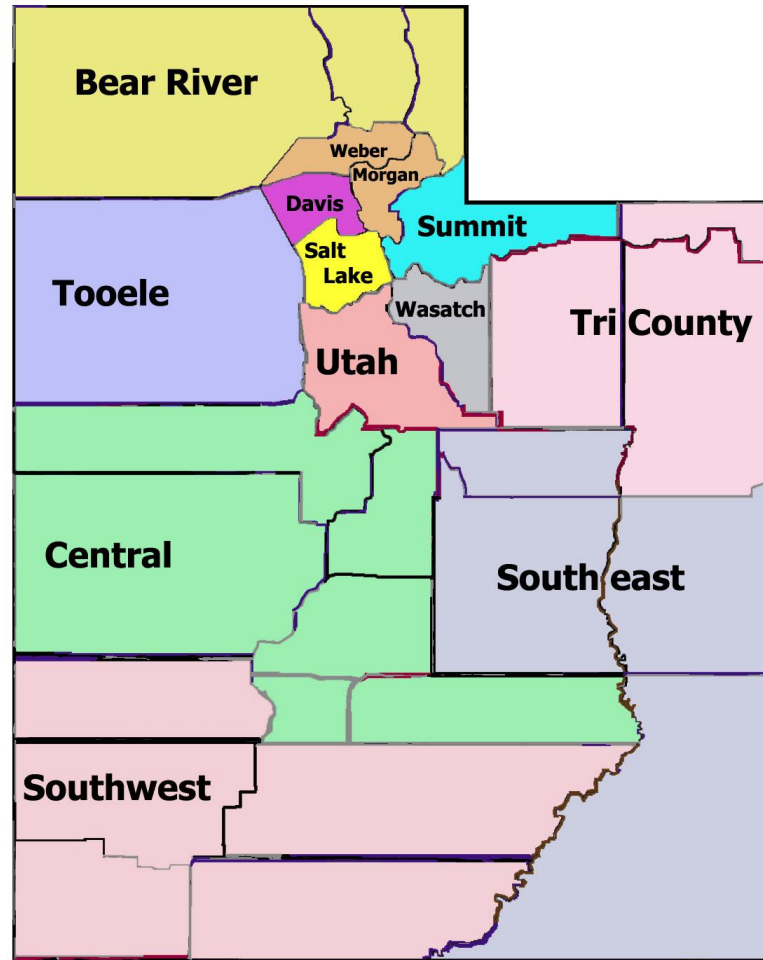
Drinking Water

# Local Health Departments





# 12 Local Health Districts



# Local Board of Health

UAC 26A-1-109

- At least three members appointed
- Represent municipalities, county and special interests
- Annually report to municipalities and counties served
- Guide public health policy, adopt regulations/fees, assure delivery of services



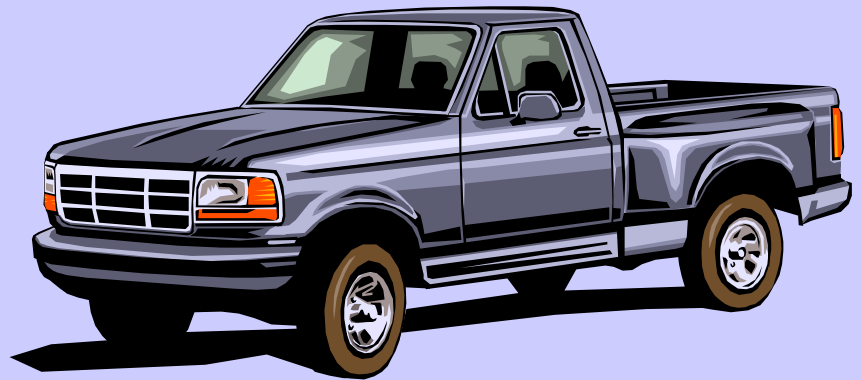
# PROGRAM OVERVIEW



“PRESERVING OUR ENVIRONMENT TO PROTECT YOUR HEALTH”

# AIR POLLUTION

- ☼ **VEHICLE EMISSIONS**
- ☼ **GAS & DIESEL**
- ☼ **PM10**
- ☼ **OPEN BURNING**
- ☼ **REMOTE SENSING DEVICE (RSD)**



# INDOOR AIR

- ☺ **ASBESTOS**
- ☺ **CARBON MONOXIDE (CO)**
- ☺ **SICK BUILDING SYNDROME**
- ☺ **RADON**
- ☺ **IRRITANTS**





# DRINKING WATER

- ◆ **SAMPLING (BACTI & CHEMICAL)**
- ◆ **PUBLIC SYSTEM INSPECTIONS**
- ◆ **WELL INSPECTIONS**
- ◆ **CONSULTATIONS**
- ◆ **COMPLAINTS**



# WASTEWATER

- ◆ PERCOLATION TESTS
- ◆ SOIL EXPLORATION
- ◆ INDIVIDUAL WASTEWATER
- ◆ CONSULTATIONS
- ◆ COMPLAINTS





# FOOD SERVICE

- 🔔 **INSPECTIONS**
- 🔔 **CONSULTATIONS**
- 🔔 **COMPLAINTS**
- 🔔 **FOOD HANDLER CLASSES**
- 🔔 **PLAN REVIEWS**







# POOLS & SPAS

- ◆ SAMPLING
- ◆ CONSULTATIONS
- ◆ CPO TRAINING
- ◆ INSPECTIONS
- ◆ PLAN REVIEWS



# SOLID WASTE

- LANDFILLS
- CONSTRUCTION/DEMOLITION
- TIRE DISPOSAL
- COMPLAINTS







# Used Oil

- Compliance Inspection
- Education / Outreach
- Collection centers



# Hazardous Waste

- Response
- Remediation
- HHWCD





# UNDERGROUND STORAGE TANKS

- ↓ INSPECTIONS
- ↓ CONSULTATIONS
- ↓ REMOVAL / INSTALLATION
- ↓ REMEDIATION





# TANNING SALONS

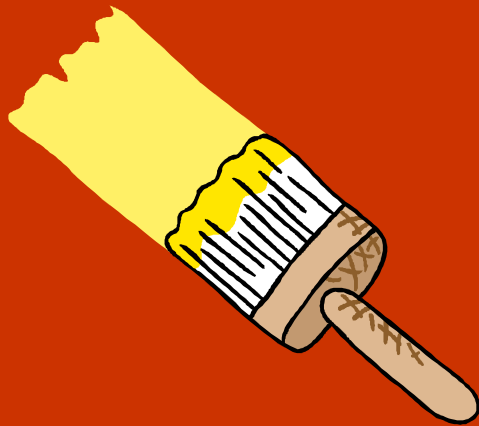
- ☺ INSPECTIONS
- ☺ COMPLAINTS
- ☺ UNDERCOVER AUDITS
- ☺ EMPLOYEE TRAINING



# LEAD PAINT

 RISK ASSESSMENT / INSPECTION

 CONSULTATIONS



# ENVIRONMENTAL ASSESSMENTS



## PROPERTY TRANSACTIONS



# BODY ARTS

- ∞ TATTOO
- ∞ PERMANENT COSMETICS
- ∞ PIERCING
- ∞ INSPECTIONS
- ∞ COMPLAINTS
- ∞ BLOODBORNE PATHOGEN TRAINING



# HOUSING & TRANSIENT FACILITIES

- MOBILE HOME PARKS
- RECREATIONAL AREAS
- LABOR CAMPS
- COMPLAINTS





# MISC. COMPLAINTS

- 📄 **HOUSING**
- 📄 **ANIMALS, INSECTS & RODENTS**
- 📄 **YARD WASTES**
- 📄 **APARTMENTS**
- 📄 **OTHERS**



# INDOOR CLEAN AIR ACT

- ⌘ COMPLAINTS
- ⌘ EATING ESTABLISHMENTS
- ⌘ WORK ENVIRONMENTS



**It's not always easy**







© KURT JONES 2003



We're just trying to protect the public



# DEQ 101

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Walter Baker,  
Director

# WATER QUALITY

# OUR MISSION

Protect surface and  
ground water quality to  
allow beneficial uses and  
to protect public health



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Water Quality

# STATUTORY AUTHORITIES

- ✓ Utah Water Quality Act
- ✓ Federal Clean Water Act
- ✓ Federal Safe Drinking Water Act



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Water Quality

# UTAH WATER QUALITY ACT (1953)

- ❖ Utah Water Quality Board
- ❖ Surface water and ground water pollution control
- ❖ Classify waters according to beneficial uses
- ❖ Establish standards to protect waters
- ❖ Enforcement and penalty authority
- ❖ Establish plans to improve water quality

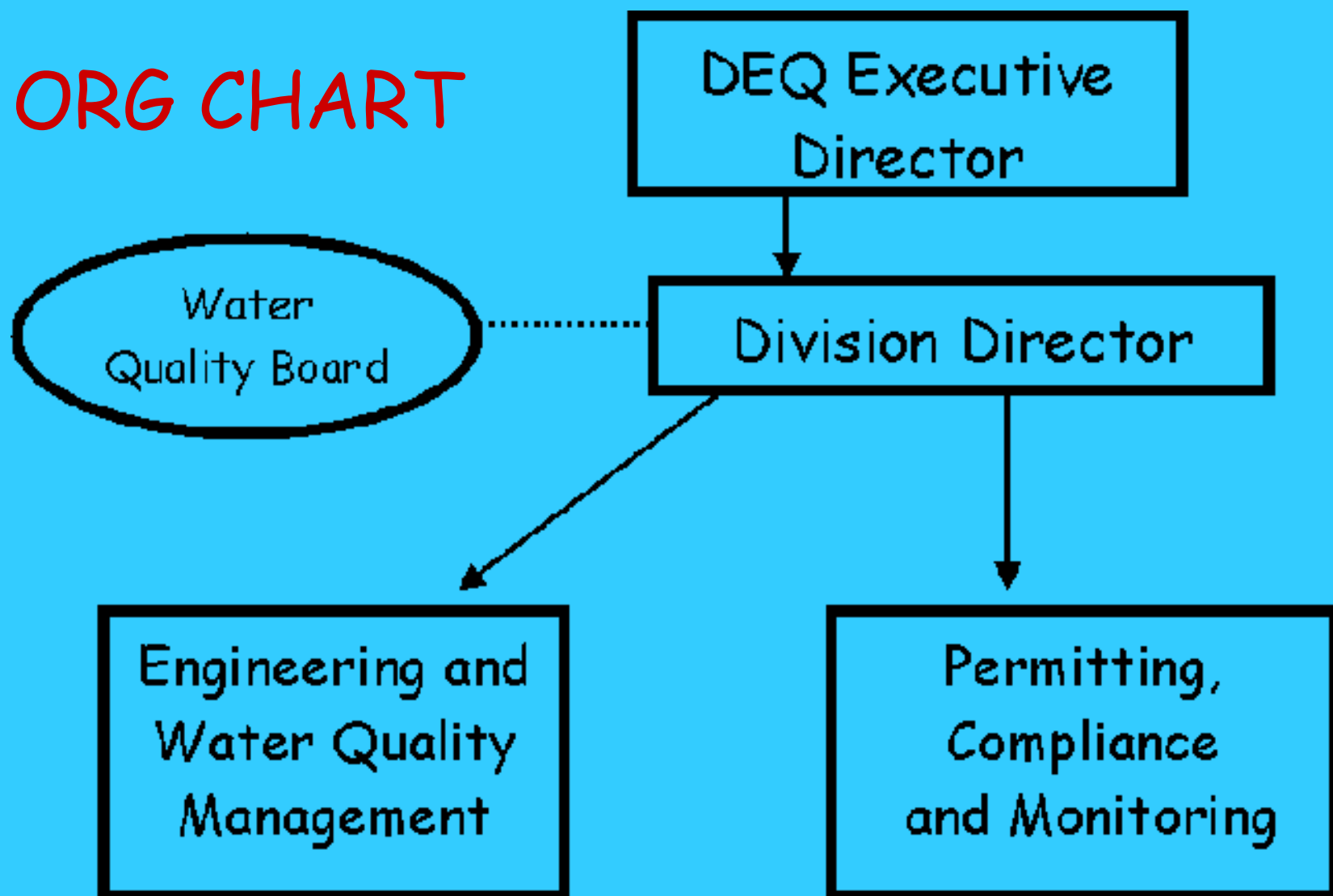


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Water Quality

# DIVISION ORG CHART



# DIRECTOR'S OFFICE

Division leadership

Budget and grant management

Division Director serves as Executive Secretary to Water Quality Board



DEQ 101

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Water Quality



# ENGINEERING and WATER QUALITY MANAGEMENT

Water quality management

TMDL/Watershed Planning

Construction assistance

Design evaluation



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Water Quality

# PERMITTING, COMPLIANCE and MONITORING

Groundwater protection

Permitting and compliance

Monitoring



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Water Quality

# MONITORING

- ❖ Chemical samples
- ❖ Biological sampling
- ❖ Continuous monitoring sites
- ❖ Groundwater well sampling



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Water Quality









## Storm Water

**PERMIT TO DISCHARGE  
AND  
STORM WATER PERMIT**

## Permitting Treatment & Discharge

forth herein. Authorizes  
this permit.

urge from its wastewater treatment plant, the outfall located at latitude 39° 15' N, named (Discharge Stream) and subject to monitoring requirements.

Water Treatment & Discharge

Permits & Compliance

DISCHARGE ELIMINATION SYSTEM (DES) MONITORING REPORT (DMR)

NOTE: Read Instructions on page 1 of this report.

DATE	TIME	LOCATION	WATER TYPE	WATER QUALITY	WATER QUANTITY	WATER QUALITY OR CONCENTRATION	WATER QUANTITY OR CONCENTRATION
YEAR	MO	DAY	TIME	LOCATION	WATER TYPE	WATER QUALITY	WATER QUANTITY
(26-27)	(28-29)	(30-31)	(32-33)	(34-35)	(36-37)	(38-39)	(40-41)
				AVERAGE			
				MAXIMUM			
				MINIMUM			
				STANDARD DEVIATION			
				COEFFICIENT OF VARIATION			
				CORRELATION COEFFICIENT			
				P-VALUE			
				T-VALUE			
				F-VALUE			
				CHI-SQUARE			
				K-S			
				SIGN RANK			
				MANN-WHITNEY			
				RANK SUM			
				RANK DIFFERENCE			
				RANK CORRELATION			
				RANK REGRESSION			
				RANK INTERCEPT			
				RANK SLOPE			
				RANK Y-INTERCEPT			
				RANK X-INTERCEPT			
				RANK CORRELATION COEFFICIENT			
				RANK REGRESSION COEFFICIENT			
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# Biosolids

## CAFOs

# SURFACE WATER

## PERMITS AND COMPLIANCE

- ❖ UPDES discharge permits
- ❖ Pretreatment program
- ❖ Storm water permits
- ❖ Biosolids permits
- ❖ Enforcement and compliance



DEQ 101

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Water Quality



# GROUNDWATER PROTECTION

- ❖ Groundwater classification and standards
- ❖ Groundwater discharge permits
- ❖ Underground injection control
- ❖ Pollution prevention planning
- ❖ Enforcement and compliance



DEQ 101

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Water Quality

## FIELD INSPECTIONS SALINE EVAPORATION PONDS



## TMDL/Planning Section

- ❖ Develop Total Maximum Daily Loads (TMDLs)
- ❖ Develop watershed restoration plans
- ❖ Assist in watershed management
- ❖ Track implementation projects



DEQ 101

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Water Quality





BEFORE





**AFTER**

# WATER QUALITY MANAGEMENT

- ❖ Non Point Source pollution control
- ❖ Water quality standards/waste load allocations
- ❖ EIS review
- ❖ COE 404 permit certification
- ❖ GIS mapping
- ❖ Water quality assessment



DEQ 101

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Water Quality



# Major Projects and Responsibilities of the Water Quality Management Section



Division of Water Quality  
Department of Environmental Quality

## Applying for and Administering CWA Section 319 Grants: A Guide for State Nonpoint Source Agencies

March 2003

United States Environmental Protection Agency  
State-EPA/NPS Partnership  
Grants Management Work Group

## STANDARDS OF QUALITY FOR WATERS OF THE STATE R317-2, UTAH ADMINISTRATIVE CODE



UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER QUALITY  
EFFECTIVE DATE OF LAST REVISION - DECEMBER 7, 2001

## STATE OF UTAH

NPS INTERAGENCY MONITORING WORKGROUP

### Chalk Creek



1991-1999 Field Evaluations and Progress Report

MAY 25, 2001

Utah Department of Environmental Quality  
Utah Department of Natural Resources  
Utah Farm Bureau Federation  
Utah Department of Agriculture and Food  
Utah State University Extension

## UTAH'S 2002 303(d) List of Waters



DEPARTMENT OF  
ENVIRONMENTAL  
QUALITY  
DIVISION OF  
WATER QUALITY



## Utah Water Quality Assessment Report to Congress 2002



Department of  
Environmental Quality



Division of  
Water Quality















# CONSTRUCTION ASSISTANCE

- ❖ Community loans and grants for wastewater systems
- ❖ Operator certification and training
- ❖ Environmental assessment preparation
- ❖ Construction and contract management



DEQ 101

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Water Quality



# DESIGN EVALUATION

- ❖ Engineering plan review
- ❖ On-site system management
- ❖ Certification of onsite system designers
- ❖ Construction inspection



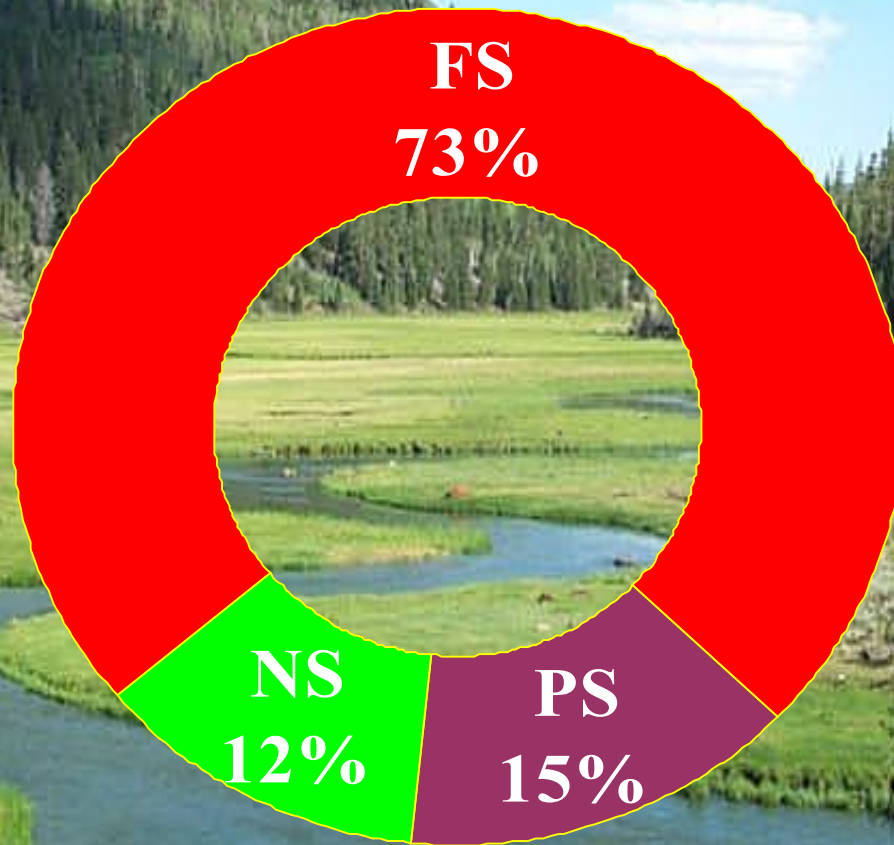
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Water Quality



# Stream Water Quality Status 2002

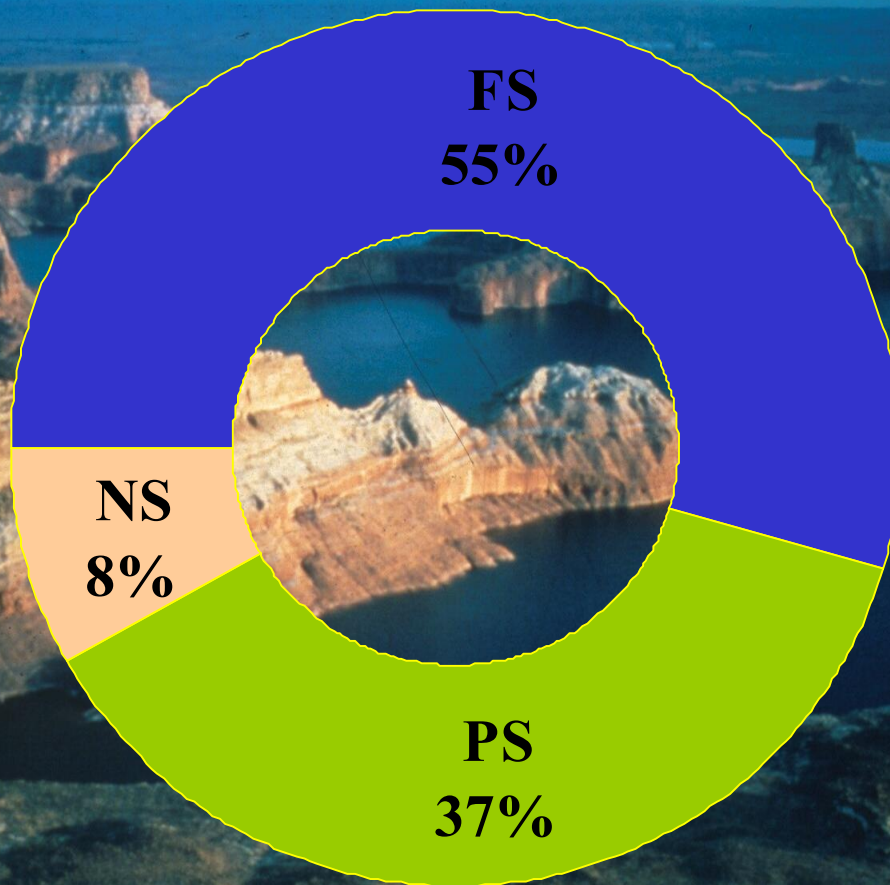


**Total miles = 10,597 miles**



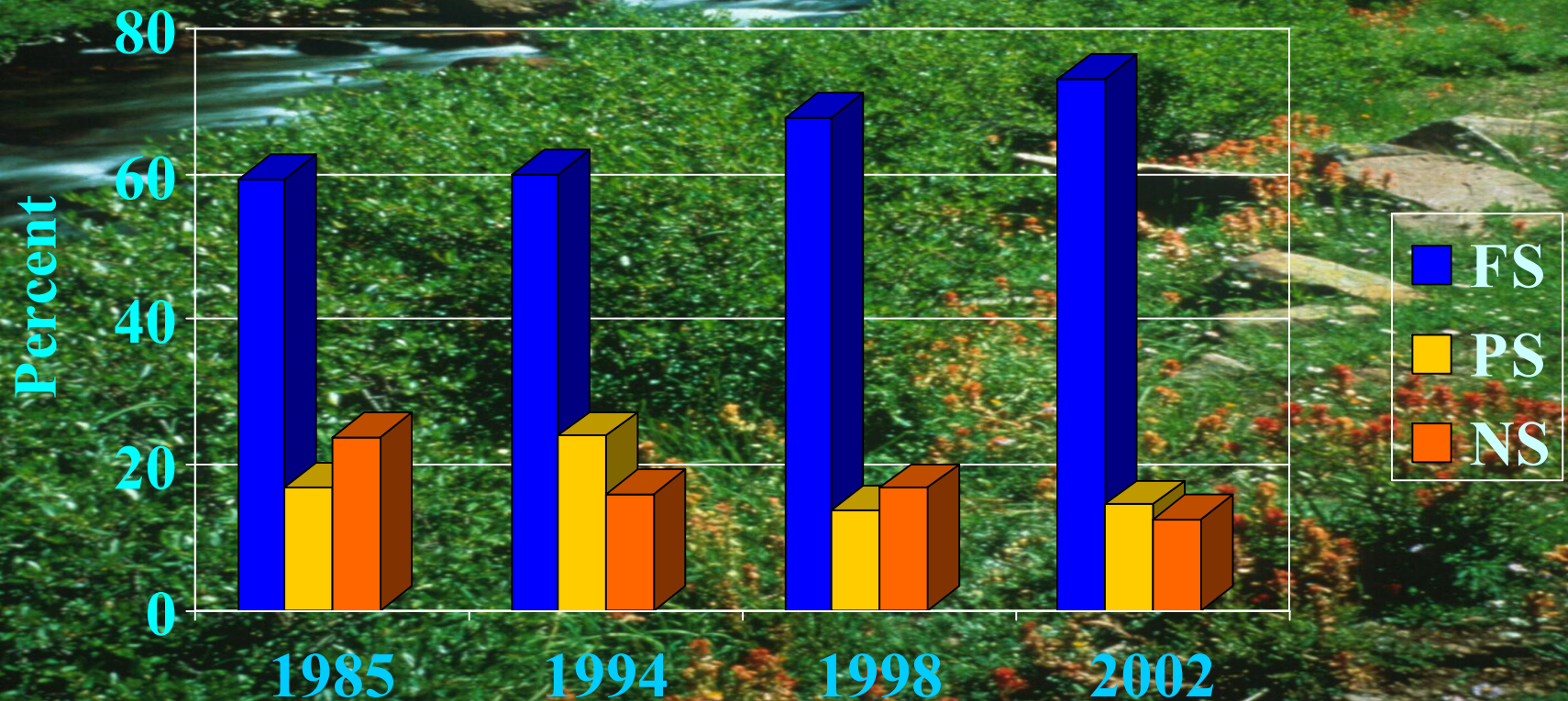
# Water Quality Status 2002

## 131 Lakes and Reservoirs





# Historical Stream Water Quality Assessment



FOR MORE INFORMATION

[www.waterquality.utah.gov](http://www.waterquality.utah.gov)



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Water Quality



# DEQ 101

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## SOLID AND HAZARDOUS WASTE



Dennis Downs,  
Director



# OUR MISSION

Ensure  
proper management  
of solid and hazardous  
waste



DEQ 101

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Solid & Hazardous Waste

# STATUTORY AUTHORITIES

- ✓ Utah Solid and Hazardous Waste Act
- ✓ Used Oil Management Act
- ✓ Waste Tire Recycling Act
- ✓ Lead Acid Battery Disposal Act



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Solid & Hazardous Waste

# PROGRAM AUTHORIZATION

EPA can authorize a state to administer solid & hazardous waste program

Authorization allows a state to administer in lieu of EPA



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Solid & Hazardous Waste

# PROGRAM AUTHORIZATION

State must have and demonstrate equivalent authority and requirements

State must have adequate resources to perform program functions

Utah was authorized in October 1984



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Solid & Hazardous Waste

# SOURCES OF FUNDING

- Solid and Hazardous Waste Disposal Fees  
Hazardous Waste, Mixed Waste, Solid Waste (Industrial, municipal), PCBs
- Fees for Services (Billable Hours)
- RCRA Grant
- State/DOD Cooperative Agreement



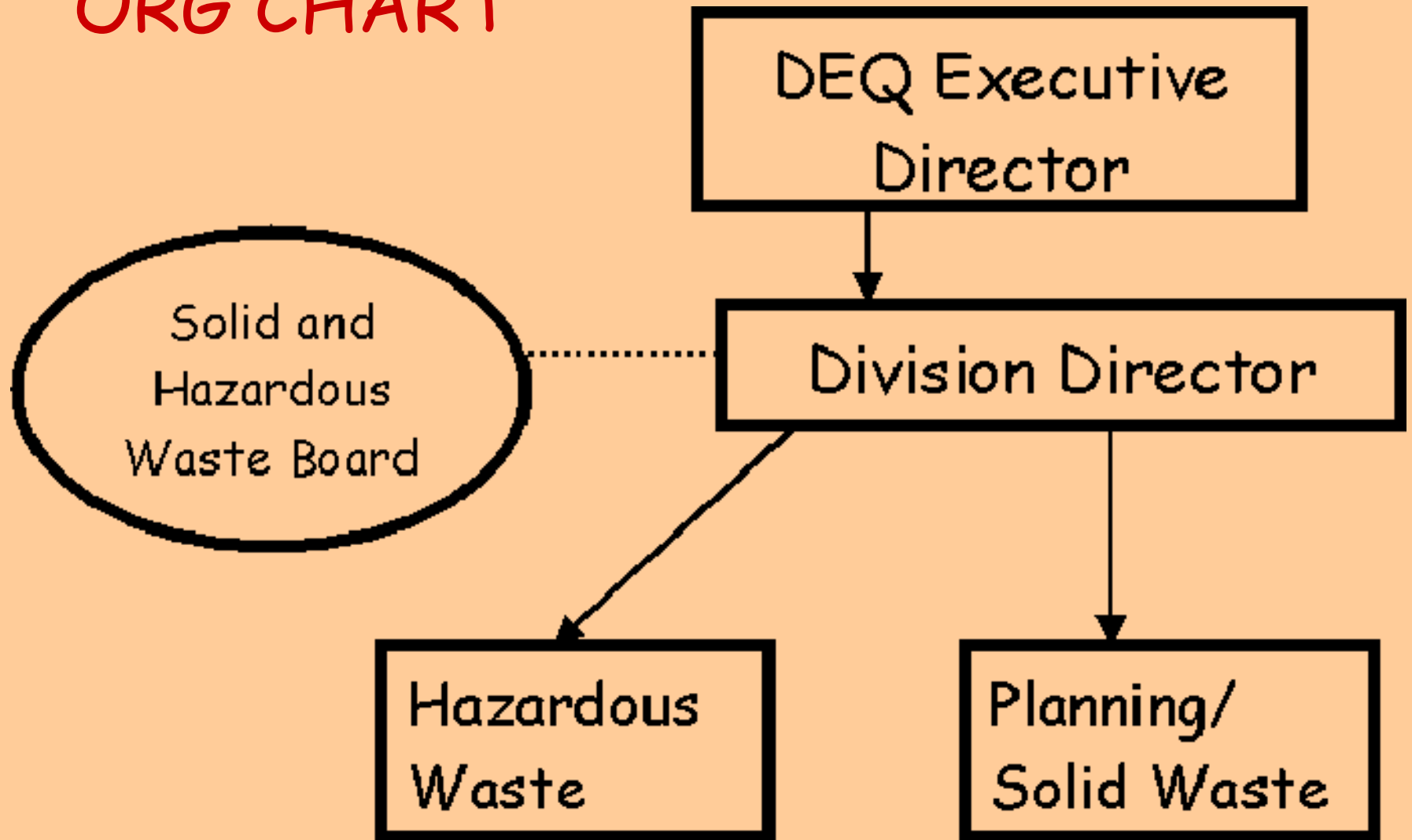
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Solid & Hazardous Waste



# DIVISION ORG CHART



# HAZARDOUS WASTE BRANCH

Commercial/Federal Facilities Section

Chemical Demilitarization Section

Hazardous Waste Facilities Section

Hazardous Waste Management Section



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Solid & Hazardous Waste

# HAZARDOUS WASTE BRANCH

Organized by facility type not by function

All do permitting, compliance/enforcement  
and corrective action



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Solid & Hazardous Waste

# HAZARDOUS WASTE UNIVERSE

1,898 Hazardous Waste Generators

97 Large Quantity Generators

1079 Small Quantity Generators

722 Conditionally-exempt SQG

21 Hazardous Waste Transporters

47 Hazardous Waste Treatment, Storage, &  
Disposal Facilities (TSDFs)



DEQ 101

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Solid & Hazardous Waste

# HAZARDOUS WASTE UNIVERSE

## Large Quantity Generators

Oil Refineries, Military Facilities, Defense Contractors, Steel Mills, Chemical/Electronic Manufacturers, etc.

## Small Quantity Generators

Automotive Repair, Dry Cleaners, Small Manufactures, etc.

## Hazardous Waste Transporters

## Hazardous Waste Treatment, Storage, and Disposal Facilities (permit required)



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Solid & Hazardous Waste



# COMMERCIAL/FEDERAL FACILITIES SECTION

Commercial Hazardous Waste Treatment, Storage  
and Disposal Facilities

Clean Harbors (Aragonite, Grassy Mountain)

Envirocare

Safety Kleen

Military installations (non-chemical warfare  
agents)

Hill Air Force Base

Utah Test and Training Range

Tooele Army Depot



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Solid & Hazardous Waste



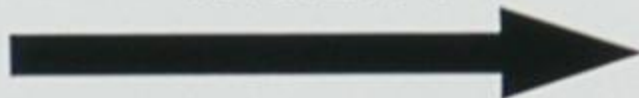




Clean Harbors®

ENVIRONMENTAL SERVICES, INC.

**GRASSY MOUNTAIN  
FACILITY**







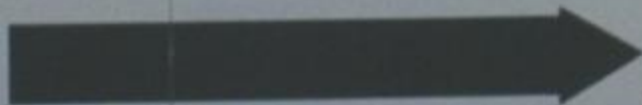


**Welcome To**  
***ENVIRO CARE***  
***OF UTAH, INC.***

**SOUTH CLIVE SITE**

**ADMINISTRATION OFFICE AND  
OPERATIONS BUILDING**

**1 MILE**





# CHEMICAL DEMILITARIZATION SECTION

Military installations dealing with research, testing, treatment, storage and destruction of chemical nerve agents and related weapons systems:

Deseret Chemical Depot

TOCDF

Area 10

CAMDS

Dugway Proving Ground



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Solid & Hazardous Waste



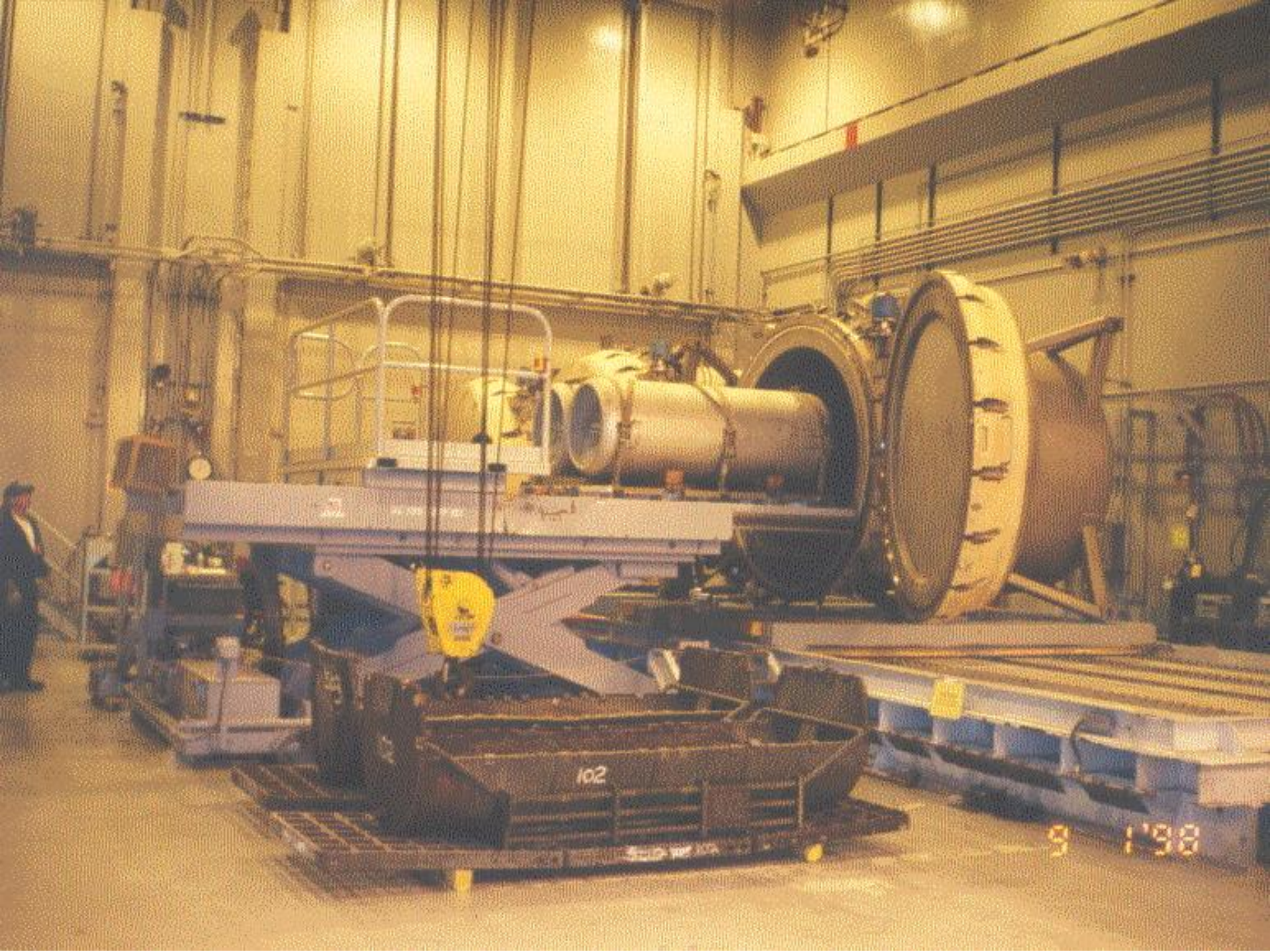


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# HAZARDOUS WASTE FACILITIES SECTION

Non-commercial treatment, storage and disposal facilities

- Dyno Nobel
- ATK Thiokol Propulsion/Bacchus Facility
- Ensign Bickford
- Western Zirconium
- Englehard



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Solid & Hazardous Waste



# HAZARDOUS WASTE MANAGEMENT SECTION

Petroleum Refineries

Large Quantity Generators

Small Quantity

Conditionally Exempt Generators

Compliance Assistance Program



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Solid & Hazardous Waste

# SOLID WASTE BRANCH

## Solid Waste Section - Used Oil Section

Regulation Development

Program Authorization

Legislation

Planning

Program Development

EPA Agreements (PPA, MOA)



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Solid & Hazardous Waste



# SOLID WASTE SECTION

Municipal Landfills

Municipal Waste-to-Energy Facility

Industrial (nonhazardous) Solid Waste  
Landfills



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Solid & Hazardous Waste

# SOLID WASTE SECTION

Commercial Solid Waste Facilities

Waste Tire Recycling Program

Other Solid Waste Operations

Land Application

Transfer Facilities

Composting



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Solid & Hazardous Waste

# ECDC Commercial SW Landfill

## Carbon County, Utah



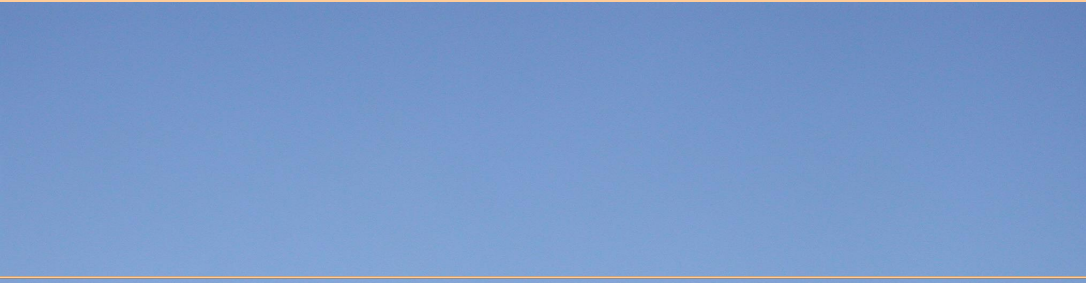


# ECDC Commercial SW Landfill





# ECDC Commercial SW Landfill





# Wasatch Energy MSW Landfill





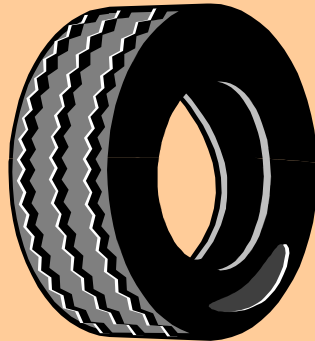
# Wasatch Energy MSW Landfill



# WASTE TIRE RECYCLING PROGRAM

Act creating the waste tire recycling program  
passed by the Utah legislature in 1990

Program is to recycle Utah waste tires



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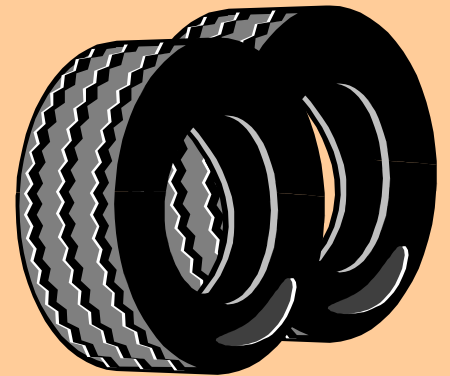
Solid & Hazardous Waste

# WASTE TIRE RECYCLING PROGRAM

Develop the waste tire recycling industry

Minimize the landfilling of waste tires

Remove waste tire piles



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Solid & Hazardous Waste

# WASTE TIRE RECYCLING PROGRAM

Disposal restrictions

Recycling fee

Transporter and recycler registration

Recycling reimbursement

Waste tire pile cleanup



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Solid & Hazardous Waste



# USED OIL SECTION

## Used Oil Management Sites

- Processors / Re-refiners
- Transporters
- Generators

## Collection Centers

- DIYer Collection Centers
- Used Oil Steering Committees

## Used Oil Grants



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Solid & Hazardous Waste

# USED OIL SECTION

Used oil collection, transportation, marketing, blending, etc.

Used Oil Recycling Outreach

Hazardous Waste Biennial Reports

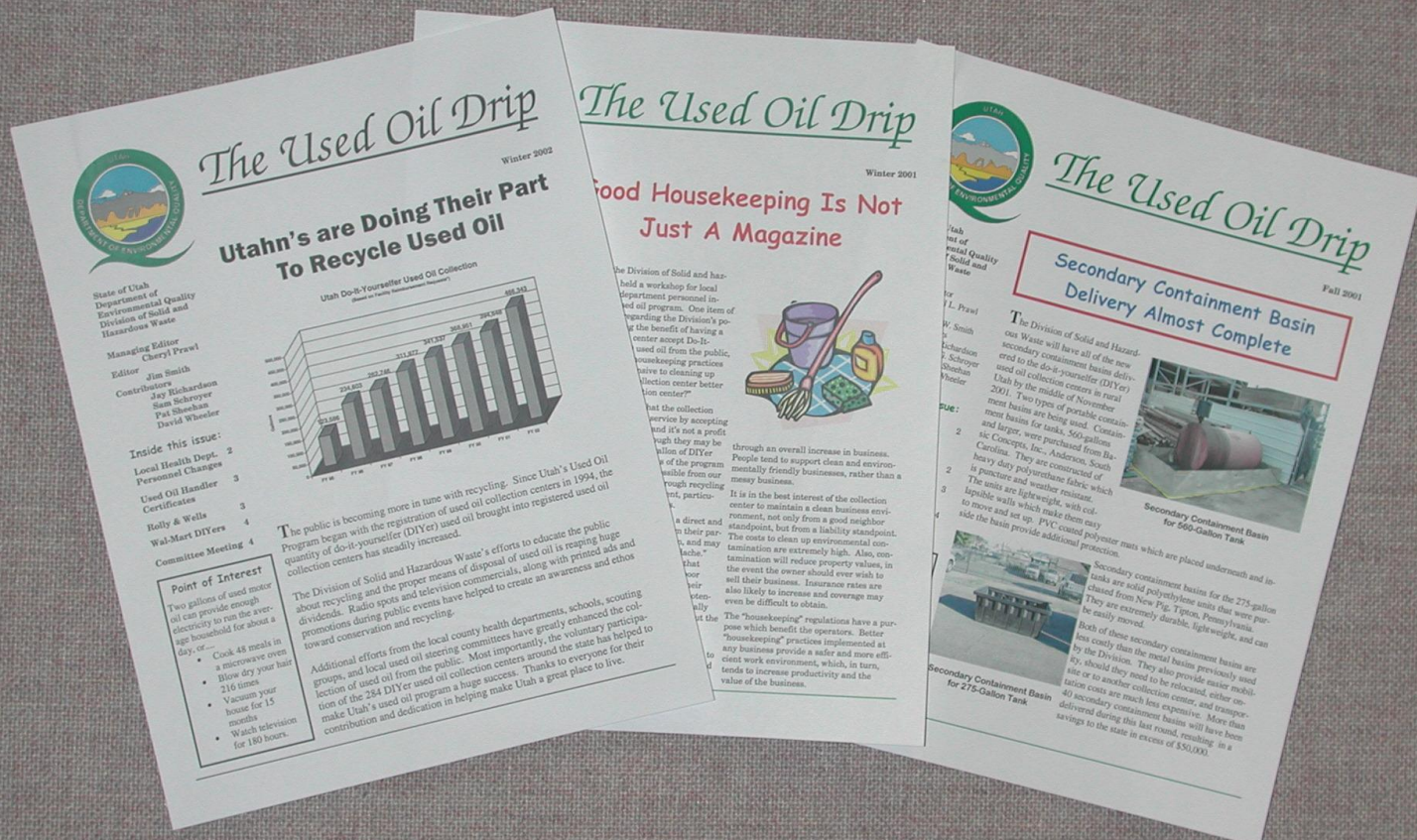


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Solid & Hazardous Waste

# USED OIL OUTREACH





# USED OIL OUTREACH





FOR MORE INFORMATION

[www.hazardouswaste.utah.gov](http://www.hazardouswaste.utah.gov)



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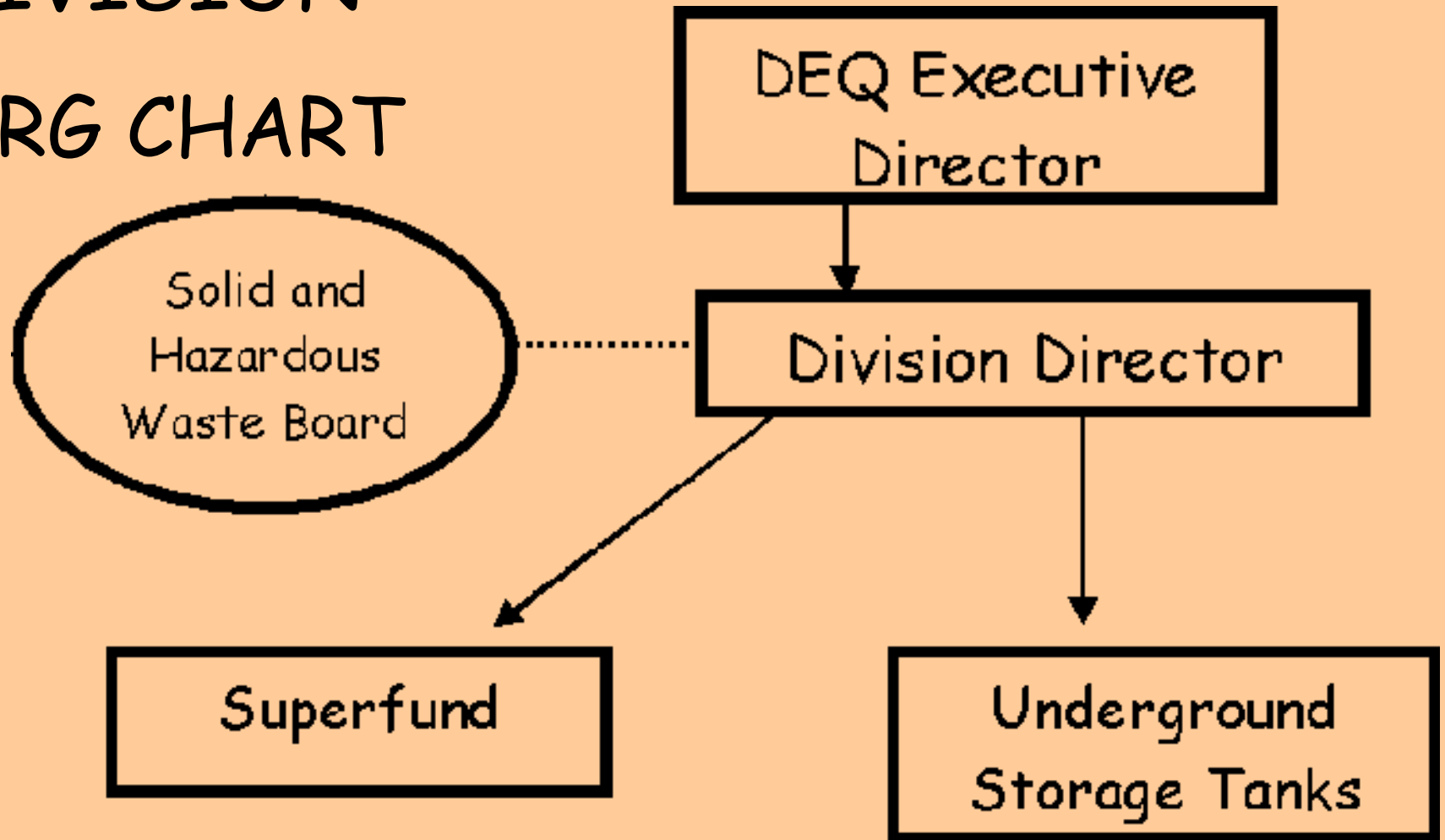
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# ENVIRONMENTAL RESPONSE & REMEDIATION



Brad Johnson,  
Director

# DIVISION ORG CHART



DEQ 101

Environmental Response & Remediation

# ERR PROGRAMS

- Underground Storage Tanks
- Comprehensive Environmental Response and Liability Act (CERCLA or Superfund)
- Emergency Planning and Community Right-to-Know Act (EPCRA)
- Voluntary Cleanup Program
- Emergency Response/Homeland Security
- Brownfields/LUST Fields
- Clandestine Drug Lab Certification



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Environmental Response & Remediation



# UNDERGROUND STORAGE TANKS

- Underground storage tank compliance.
- Leaking tank cleanup oversight and assistance.



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Environmental Response & Remediation

# UNDERGROUND TANKS



- Oversight installations and closures.
- Compliance inspections.
- Release detection and prevention inspections.

# LEAKING TANKS PROGRAM



- Regulate Tanks that have leaked.
- Financial Assurance for cleanup (PST Fund).



# UNDERGROUND TANKS CLEANUP (The "Flaming Backhoe")





# CERCLA/SUPERFUND

- Cleanup of uncontrolled or abandoned hazardous substances sites.
- ARAR's - Applicable or Relevant and Appropriate Requirements.
- Federal program with "substantial and meaningful" involvement by states.



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Environmental Response & Remediation

# CERCLA/SUPERFUND (Site Investigation Process)

- Discovery
- Preliminary Assessment
- Site Inspection
- Hazard Ranking Scoring
- NPL Listing



# CERCLA/SUPERFUND (Remedial Process)



- Remedial Investigation.
- Feasibility Study.
- Remedial Construction.
- De-listing.
- Five Year Reviews.



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Environmental Response & Remediation

# EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW (EPCRA)

- Emergency Planning - SERC  
LEPCs.
- Emergency Release  
Notification.
- Hazardous Chemical Storage  
Reporting.
- Toxic Chemical Release  
Inventory.



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Environmental Response & Remediation



# VOLUNTARY CLEANUP PROGRAM

- Entirely Voluntary.
- Eligibility - Division Reviews.
- Oversight Costs.
- Public Participation.



# VOLUNTARY CLEANUP PROGRAM



- Cleanup Goals - Based on Land use.
- State and Local permits.
- Liability Release.



# BROWNFIELDS

- Properties that cannot be redeveloped due to contamination.
- Site Assessment, Cleanup Grants, Loan Funds.



**BEFORE**

OGDEN  
BLOCK  
37A



**AFTER**



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Environmental Response & Remediation

# EMERGENCY RESPONSE AND HOMELAND SECURITY



- Emergency Response Plans.
- Emergency Response Committee.
- Duty Officers.
- Training and Exercises.
- Homeland Security Coordination.



# CLANDESTINE DRUG LAB PROGRAM



- LHD: Oversight of the cleanup.
- DOH: Develop cleanup standards.
- DEQ: Cleanup Contractor Certification Program.

FOR MORE INFORMATION

[www.environmentalresponse.utah.gov](http://www.environmentalresponse.utah.gov)



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Environmental Response & Remediation



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# RADIATION CONTROL



Dane Finerfrock,  
Director

# OUR MISSION

Assure Utah citizens  
the lowest possible exposure  
to any form of radiation.



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Radiation Control



## OUR AUTHORITIES

- ✓ State Radiation Control Act
- ✓ Federal Atomic Energy Act

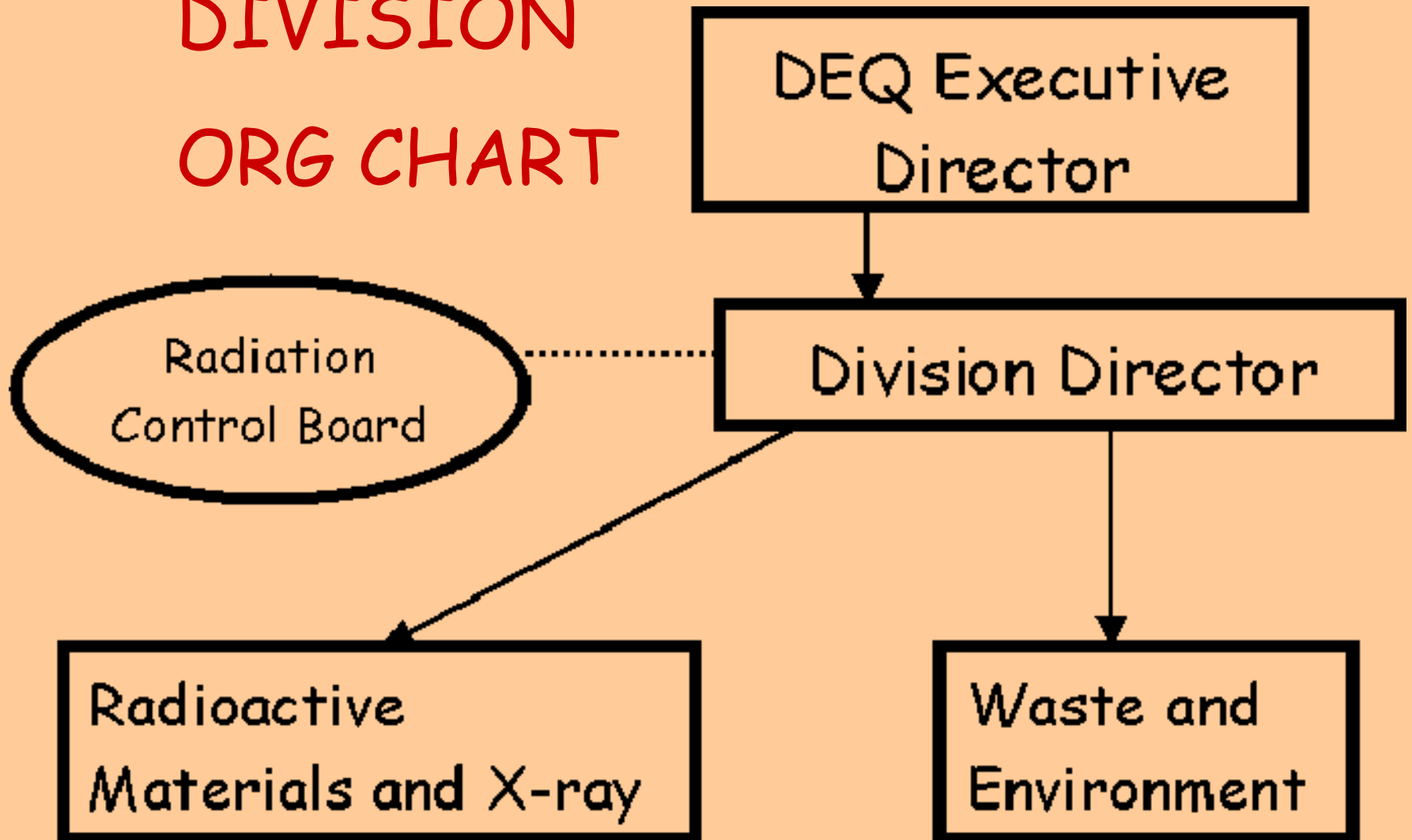


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Radiation Control

# DIVISION ORG CHART



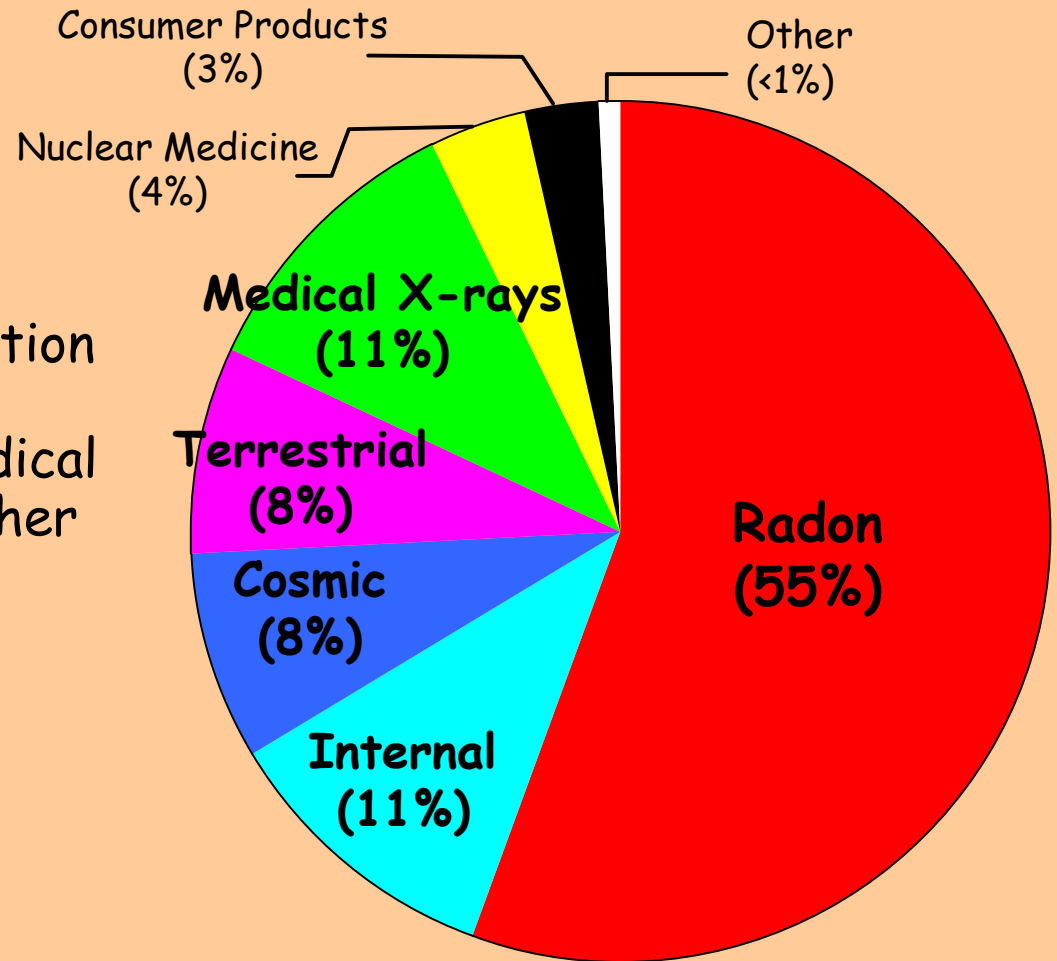


# AVERAGE ANNUAL DOSE TO US CITIZEN FROM 'BACKGROUND' RADIATION

Natural Background Radiation  
82%

Man-made Radiation = medical  
+ consumer products + other  
18%

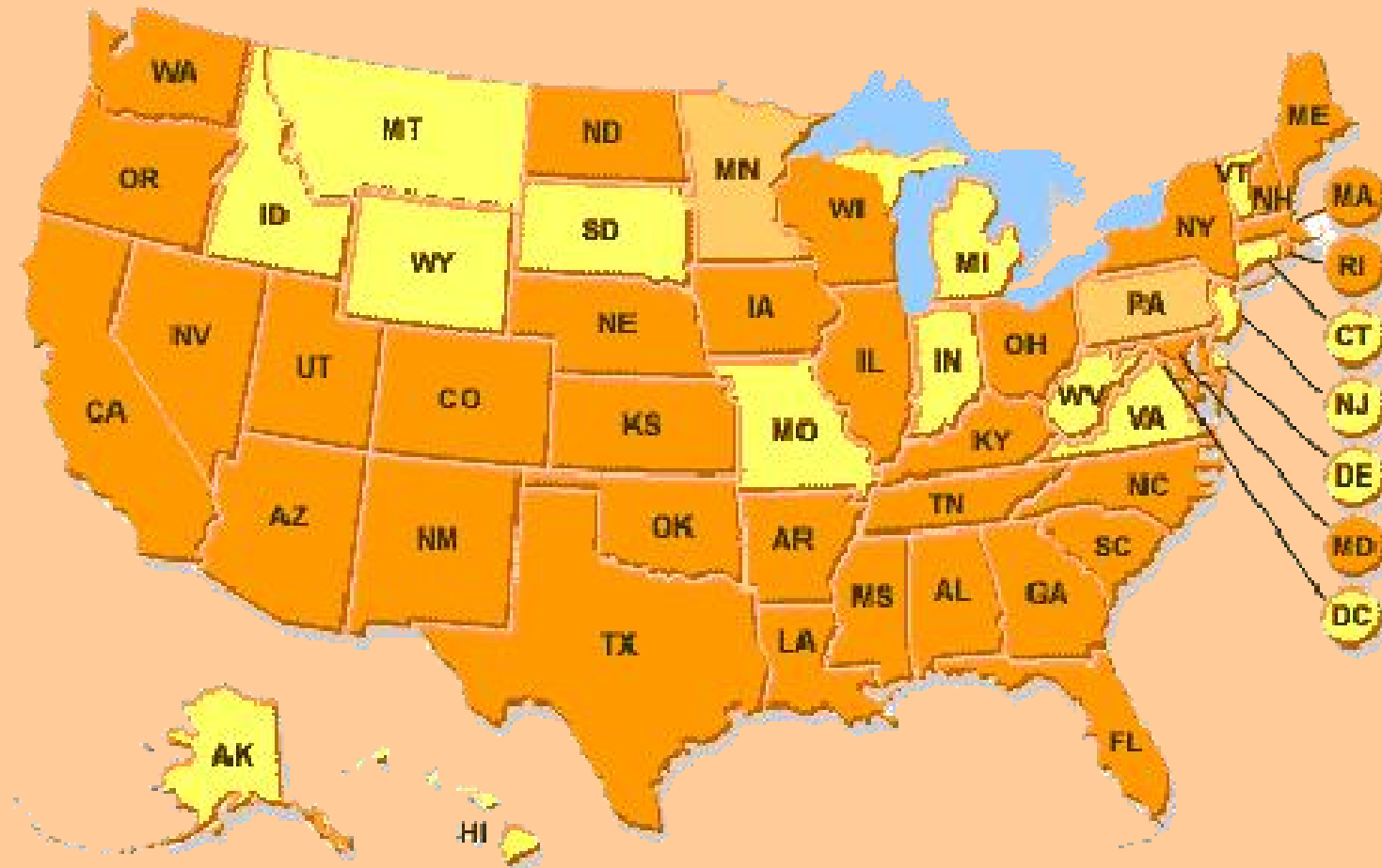
Total Effective Dose  
360 mrem





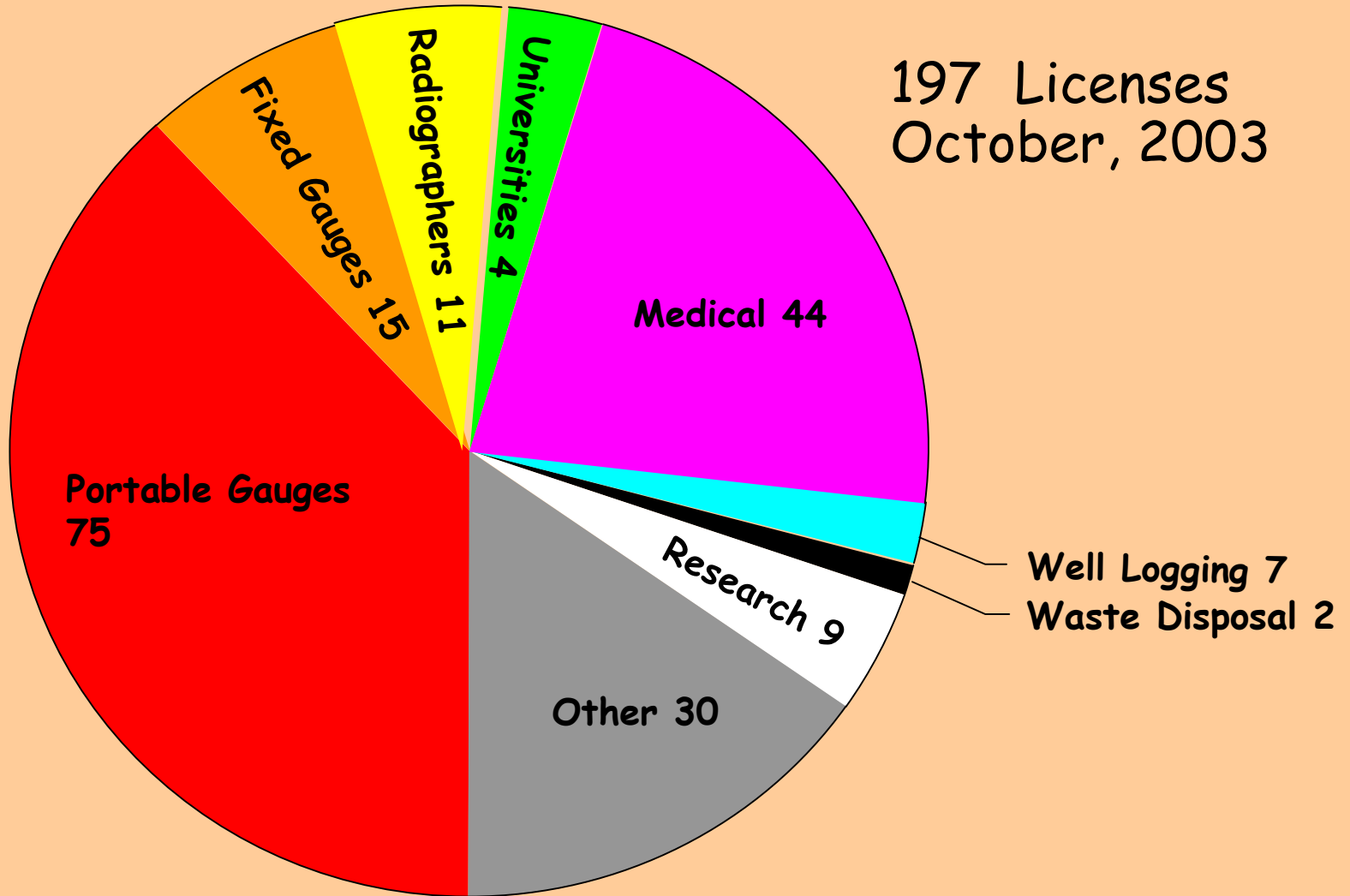


# NRC AGREEMENT STATES



**Agreement States** **Non-Agreement States** **Letter of Intent-AS**

# RADIOACTIVE MATERIALS LICENSES



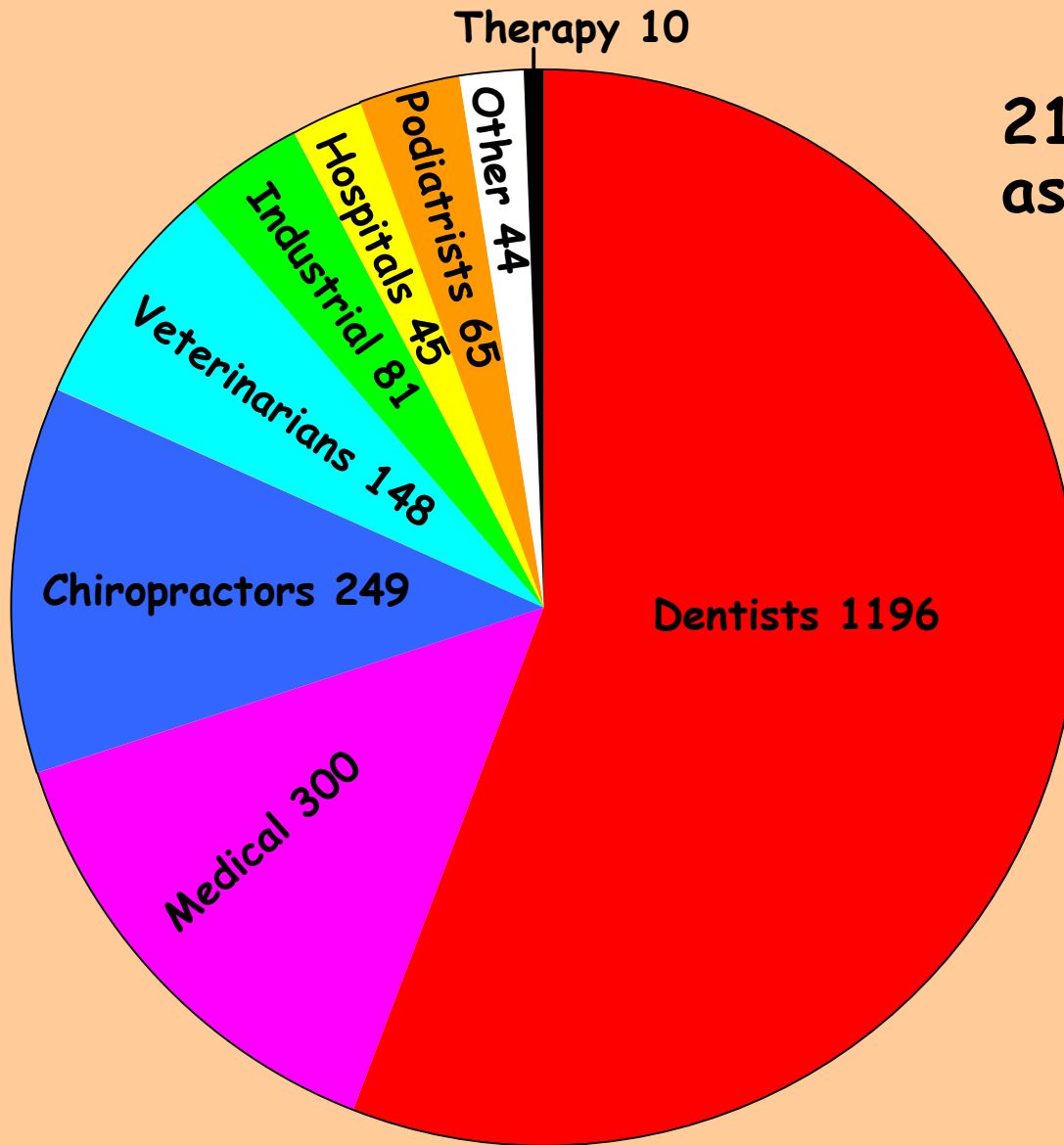






# FACILITIES WITH X-RAY UNITS

2138 Total Facilities  
as of October, 2003



# PARTNERSHIPS

- Radon Grant
- MQSA Grant
- DOH Grant
- DOE WIPP Cooperative Agreement



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Radiation Control



# CROSS-DEQ REGULATION

Kennecott

Radioactive Material License

X-ray registrant

Groundwater permits

Air Quality permits



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Radiation Control



FOR MORE INFORMATION

[www.radiationcontrol.utah.gov](http://www.radiationcontrol.utah.gov)



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Radiation Control



# DEQ 101

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# AIR QUALITY



Rick Sprott,  
Director

# STATUTORY AUTHORITIES

- ✓ Federal Clean Air Act
- ✓ Utah Air Conservation Act



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Air Quality

# OUR MISSION

Protect public health  
and the environment  
from the harmful effects  
of air pollution



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Air Quality



# PARTNERSHIPS

- Industry Groups
- Environmental Groups
- City and County Officials
- Local Health Departments
- Environmental Protection Agency
- Western Regional Air Partnership

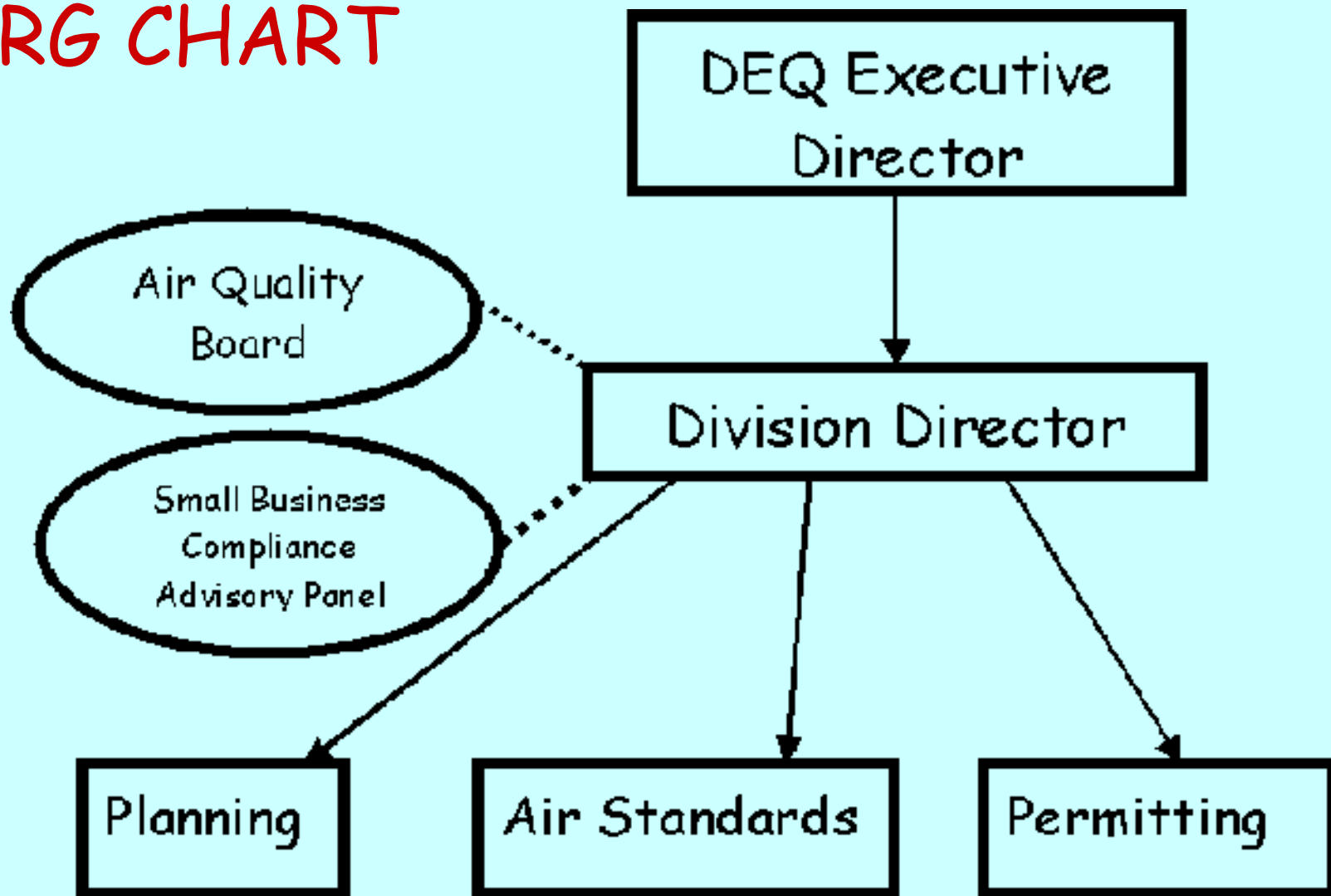


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Air Quality

# DIVISION ORG CHART



# DIRECTOR'S OFFICE

Accounting and budget

Staff attorney

Desktop support

Toxicology

Director serves as Executive Secretary to the  
Air Quality Control Board.



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Air Quality

# PLANNING BRANCH

State Implementation Plans

Rules development

Emissions inventories

Air modeling

Mobile sources

Database and web functions



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Air Quality





# AIR STANDARDS

- Air Monitoring Center
- Compliance and Inspection
- Hazardous Air Pollutants
- Lead-based paint
- Asbestos



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Air Quality

# PERMITTING

- Operating Permits
- New Source Review
- Small Business Assistance



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Air Quality

# HOW ARE WE DOING?



The air is cleaner today than it was 10 years ago!

On the other hand, we know that very small quantities of air pollution are more harmful than we knew 10 years ago.

We don't know enough about Hazardous Air Pollutants (HAPs), especially about interactions among them.



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Air Quality

# AIR QUALITY STANDARDS

EPA establishes health standards based on epidemiological studies and laboratory tests.

Standards are set to protect the most sensitive people - elderly, children, people with respiratory disease.

Cost is not considered in setting the standards—it is considered in implementing the standards.



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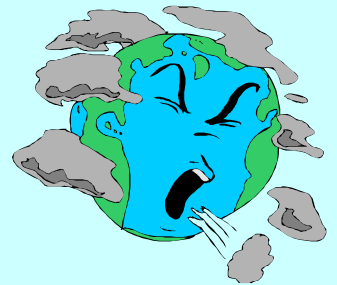
Air Quality

# POLLUTANTS OF NATIONAL CONCERN

**Particulate Matter ( $PM_{10}$  and  $PM_{2.5}$ )** - Spread out over wide area

Problem / Health Effect: Gets caught deep in lungs - Asthma. Recent evidence it affects the heartbeat.

Sources: Vehicles, woodburning, tilling (summer), sand/gravel operations



DEQ 101

Air Quality

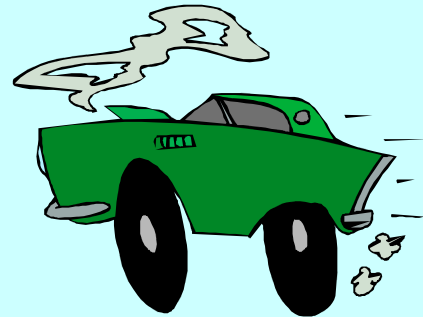


# POLLUTANTS OF NATIONAL CONCERN

**Ozone ( $O_3$ )** - Spread out over wide area

Problem / Health Effect: Long-term lung damage (cracking, etc)

Sources: Vehicles, forests, combustion processes



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# POLLUTANTS OF NATIONAL CONCERN

**Carbon Monoxide (CO)** – Very localized  
Problem / Health Effect: Short-term  
suffocation  
Sources: **VEHICLES**, woodburning, space  
heating



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Air Quality

# AIR QUALITY STANDARDS

- We've had trouble meeting:
  - Ozone: 80 ppb - (8-hr)
    - 120 ppb - (Old 1-hr Standard)
  - New PM<sub>2.5</sub> Standard - Monitoring
    - 15  $\mu\text{g}/\text{m}^3$  (annual)      • 65  $\mu\text{g}/\text{m}^3$  (24-hr)
    - PM<sub>10</sub>: 150  $\mu\text{g}/\text{m}^3$  (24-hr)

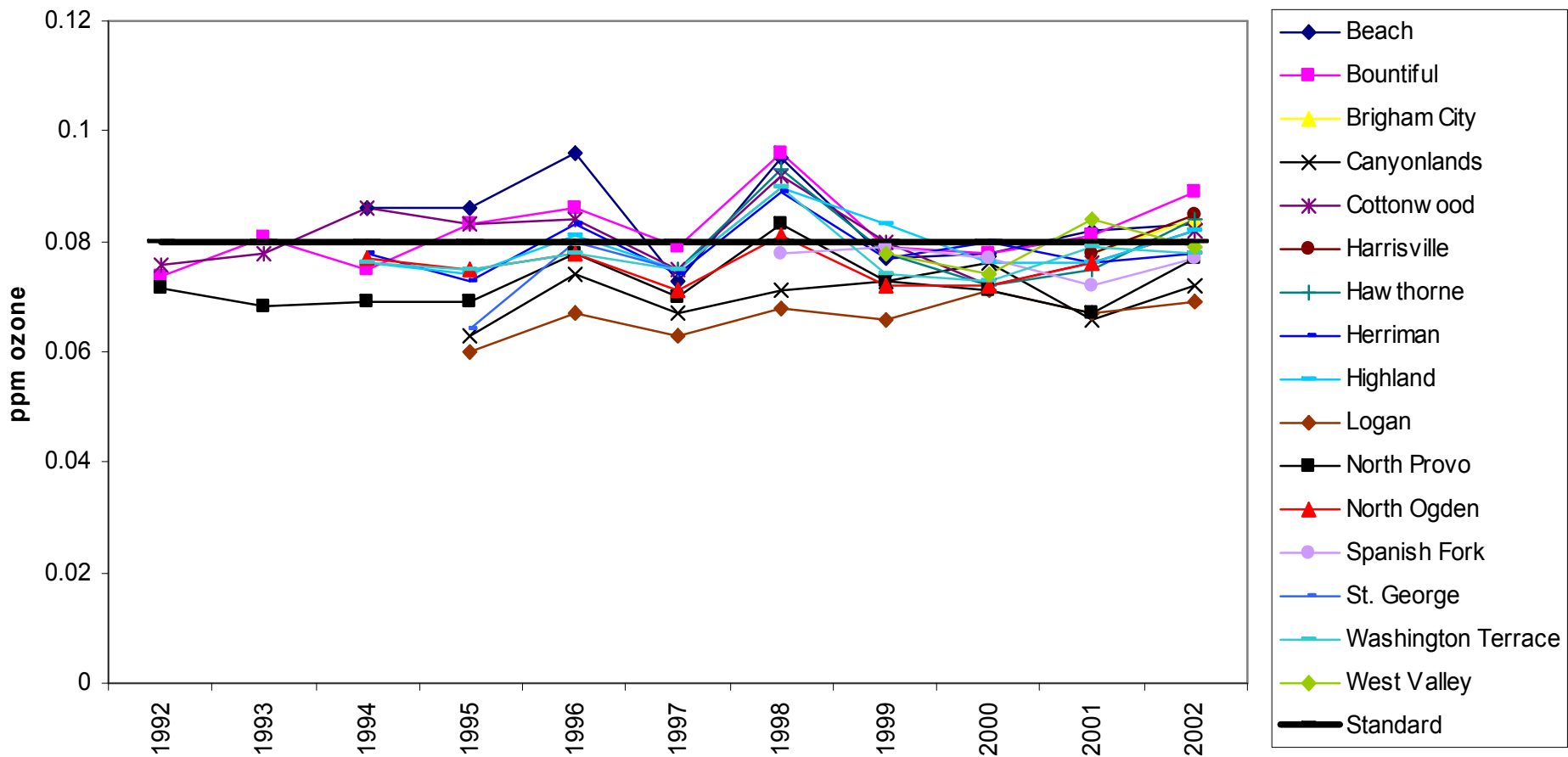


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Air Quality

# 4th High, Daily Maximum, 8-Hour Ozone Trends



# AIR MONITORING NETWORK

Monitors are located throughout Utah

Concentrated along Wasatch Front





**National Ambient Air Quality Standards  
Non-attainment and Maintenance Areas  
in the State of Utah**

**May, 2001**



**O<sub>3</sub> Maintenance Area**



**CO Non-attainment and Maintenance Areas**



# AIR PERMITS

Two types:

- ➔ Approval Orders (AO): New Source Review (NSR) or construction permits - Title I of CAA
  - ✓ Prevention of Significant Deterioration (PSD)
  - ✓ Major or Non-Attainment NSR
  - ✓ Minor NSR
- ➔ Operating Permits - Title V of CAA



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Air Quality

# APPROVAL ORDERS

Required for new, modified or relocated sources

Exemptions for small sources

NOT meant to control nuisances such as odors or noise or to be used as a zoning mechanism



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Air Quality

# ANNUAL PROGRAM EFFORT

471 Permitting documents in FY03

326 Approval Orders issued

145 Other misc. documents

Sales tax exemptions

Name changes

Emissions banking actions

Etc.



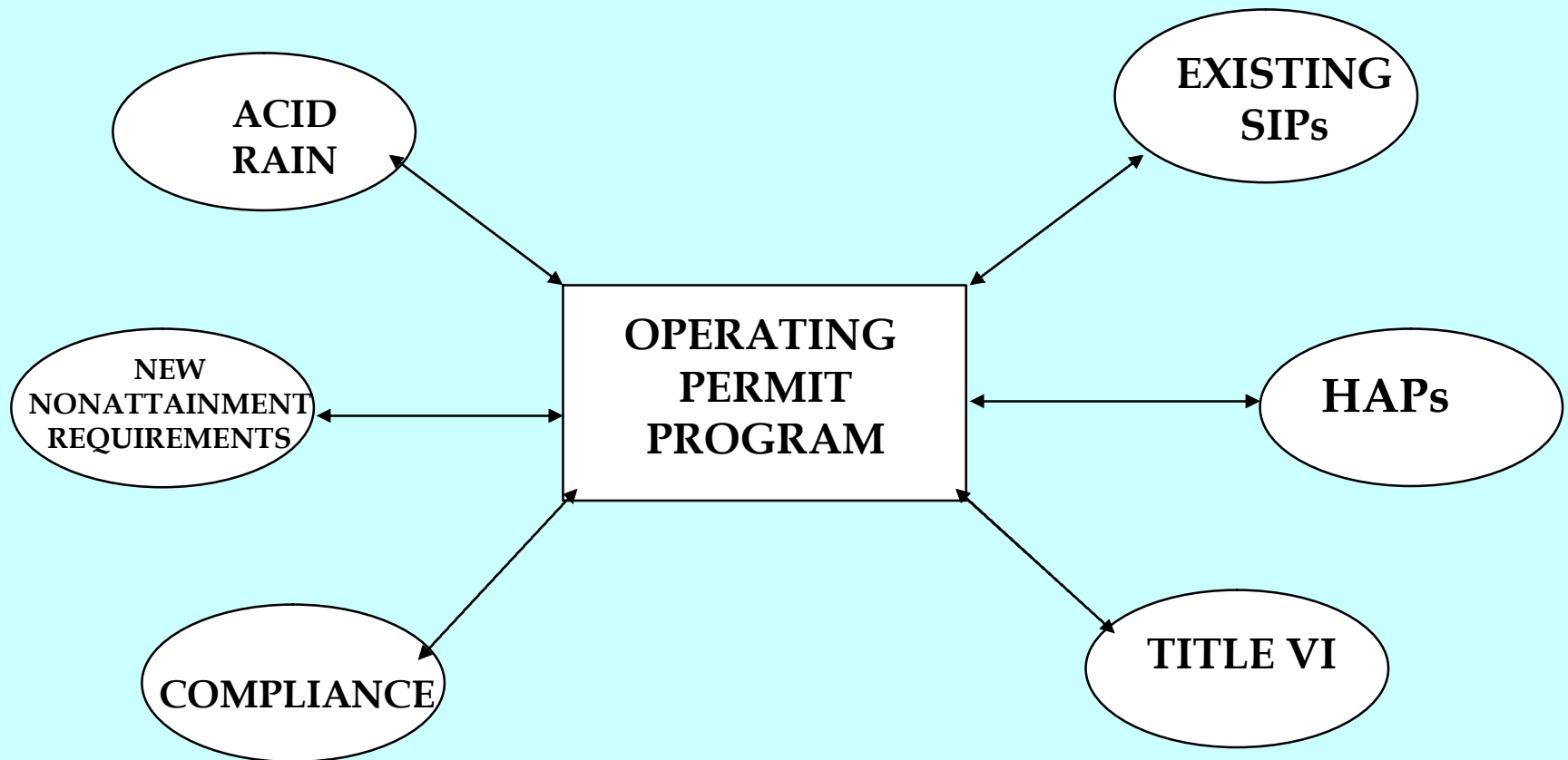
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Air Quality

# TITLE V OPERATING PERMIT PROGRAM

Consolidate requirements





# TITLE V OPERATING PERMIT PROGRAM

Greater certainty for sources

An enforcement tool

Five-year term

Public/EPA involvement

Monitoring, record keeping, and reporting

Compliance certification



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Air Quality

# COMPLIANCE

Over 2,000 sources regulated

Inspections conducted to determine compliance

100-150 Audits performed annually to ensure compliance with emissions limits and inventory accuracy



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# COMPLAINTS RECEIVED

400-500 Annually



55% dust-related

40% odor-related

5% other

Many minor nuisances



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# HAPS (Hazardous Air Pollutants)



Delegated federal program

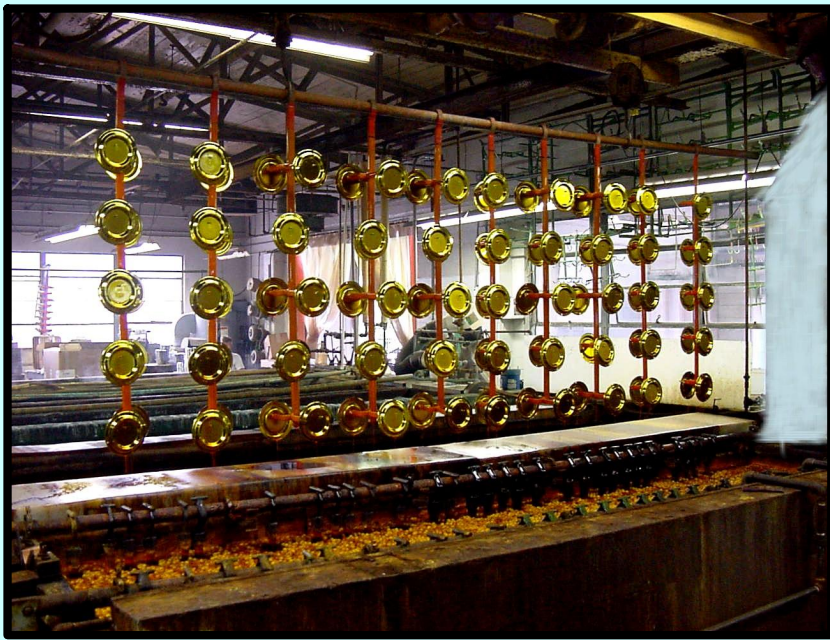
Focus: Determine compliance with State and Federal regulations involving emissions of hazardous air pollutants.



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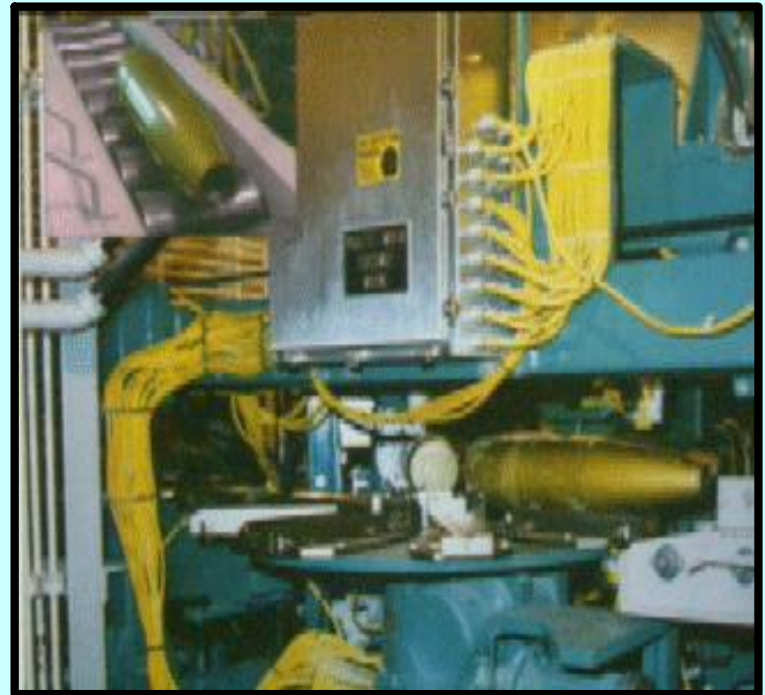
Air Quality





# NESHAP

National Emission Standards  
Hazardous Air Pollutants



# MACT

Maximum Achievable  
Control Technology



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**Asbestos  
NESHAP**



**Lead-  
based  
Paint**



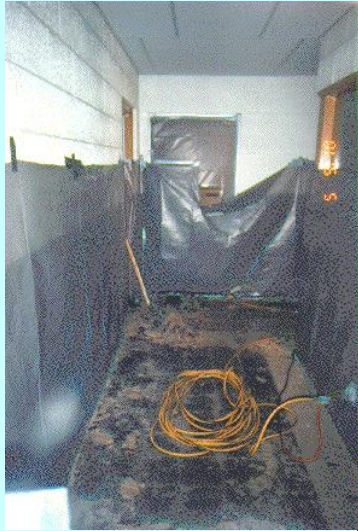
**Asbestos  
in Schools**



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# Lead-based Paint AHERA



## Asbestos NESHAP



## State Asbestos Rules

# CURRENT ISSUES

NSR Reform

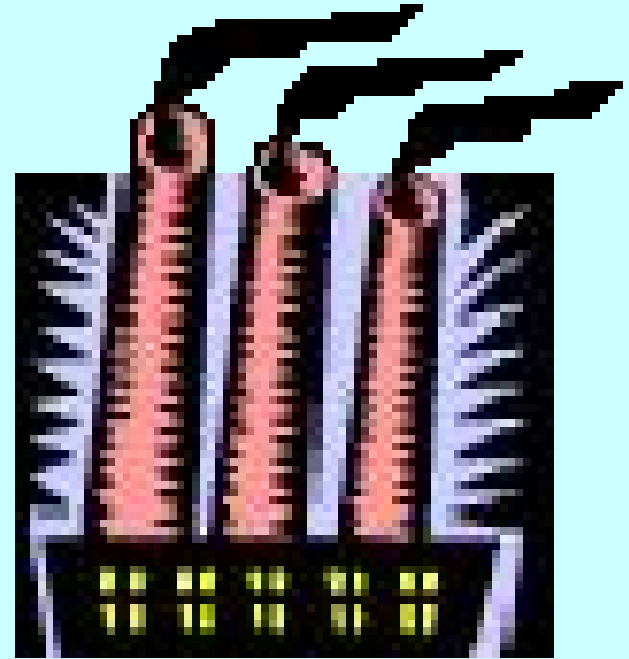
Multi-pollution legislation

WRAP & Regional Haze

EPA Oversight & State Primacy

New Power Plants in Utah

Sand and Gravel Pits



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Air Quality

FOR MORE INFORMATION

Choose Clean Air Website

[www.cleanair.utah.gov](http://www.cleanair.utah.gov)



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Air Quality





THOUGHT  
FOR THE DAY:

Most smiles  
Are  
started  
BY  
ANOTHER  
SMILE.





**So SMILE!  
You've  
completed  
DEQ 101!**